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Original Articles.

MEDULLARY ANESTHESIA IN GYNECOLOGY.*

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It is now about one year and a half since Bier, of Kiel, Germany, announced to the profession that he had found a new method of anesthesia, consisting of injections of cocain into the subarachnoid space of the spinal cord[1]. His methods were promptly put to the test by various obstetricians, gynecologists and surgeons, and to-day the whole surgical world is agog to learn the indications for the use of this method, its limitations and its special field. The original supposition was that it was applicable to cases demanding a limited field of work and the practice of the early operators was to confine it to operations upon the lower extremities. This was gradually extended to include operations within the pelvis, the line of analgesic demarcation being drawn at the umbilicus. This naturally led to the conclusion that the special field for its application was embraced in the three departments of obstetric, gynecologic and genito-urinary surgery, together with the general surgery of the lower extremities. Further experience with the method and with the use of larger doses has extended to the regions of the body in which surgical work can be done under this method of anesthesia until it includes all parts, both superficial and deep, from the tip of the toes up to and including the breasts. The head, neck and upper extremities are outside its sphere, and probably will always remain so.

It would seem, therefore, to be a matter of special pleading to insist that gynecology has any special claim on the method for its particular use, and yet there are reasons for insisting that it has in this department a special indication. We know that after an injection of the cocain, the analgesic effect begins in the toes and gradually extends up the lower extremities, the extent of its complete analgesic influence depending on the amount of the drug used. It has been thoroughly established, however, that the dosage necessary to produce anesthesia as high as the umbilicus is perfectly safe; its action is prompt and the unpleasant effects are not severe.

Tuffier began his extension of the work from the lower extremities to the trunk of the body by operations, first on the perineum, then on the rectum, extending it gradually to the bladder, ureter, to vaginal hysterectomies, appendectomies, hernias, and finally gastroenterostomies. Encouraged by his success in these regions, he has extended the field of operation to the kidneys and even to operations on the breast. To secure surgical anesthesia in these latter regions it is not necessary to make the injection any higher than the fourth space in the lumbar region, but it is necessary to use larger doses.

On Sept. 27 last, I had the privilege of seeing Dr. Neven, one of Tuffier's assistants, remove a small fibroid tumor from the right breast, the patient showing no signs of pain, either during the incision or the sewing up of the wound. In this instance three cubic centimeters of a 2 per cent. solution of cocain were used. Seven minutes after the injection the incision was made and the entire operation completed in about twenty minutes. There was no vomiting in this case, but the respirations were excited and sighing in character. Profuse perspiration came on during the operation, and when the woman was raised up on the table for the purpose of applying the dressing and bandage, she became extremely faint and limp, and asked for water. The faintness was not, however, greater than under similar circumstances after the use of ether or chloroform. Hot black coffee was used in this case as a stimulant.

In addition to the increased dosage, it is possible that the line of anesthesia can be carried higher up the body by a forcible injection of the cocain. In my own experience, the first case in which I used it was subjected to this method; that is, the piston was shoved home quickly and the fluid was suddenly and forcibly injected. In that case, although the operation was a vaginal hysterectomy, the tests that were applied showed that the line of analgesia extended above the breast line; and it was remarked at the time that undoubtedly an operation in that case could have been performed on the breast as painlessly as on the uterus.

At the Lariboisière Hospital it is the custom of both Dr. Tuffier and his assistants to inject the cocain slowly and steadily. Whether there was headache following the large dose of cocain in the breast case just mentioned I was unable to learn, but the other phenomena—nausea, vomiting, sweating, chilly sensations and general depression—were not so pronounced as in a case of vaginal hysterectomy for epithelioma of the cervix done on the same day by Dr. Lyot, another of Tuffier's assistants, with only 1/6 grain of cocain. It has doubtless been the observation of all of us that in many instances a small dose of morphin administered hypodermically will be followed by serious nausea, vomiting and headache, while a larger dose in the same patient will not be attended by any of these distressing symptoms. It is quite possible that the same rule will apply to the dosage of cocain in these spinal injections. Indeed, in conversation with Tuffier in the early part of this month, he expressed himself as inclined to think that the rule

* Read in a general discussion of Anesthesia by Lumbar Puncture before the Section on Obstetrics and Gynecology of the New York Academy of Medicine, Oct. 25, 1900.

1. Bier performed his first operation under medullary analgesia Aug. 16, 1898, and published a report of his first six cases in April, 1899. We now know that J. Leonard Corning, of New York, devised this method and put it on a practical basis in 1885.

would hold, and that the dosage would be rather enlarged than diminished as further experience was gained. In one case in which I saw him operate, the operation being an abdominal hysterectomy for bilateral hydrosalpinx, 1/3 grain of cocain was used. The anesthetic effect was more promptly produced, the vomiting consisted in one slight eructation about three minutes after the injection was made and before the operation was begun. There were very extensive and firm adhesions in the pelvis, but during the entire operation, even to the passing of the final stitch, the patient gave no evidence of the slightest pain or discomfort from the manipulations.

The various phenomena, the vomiting, sweating, the hurried respiration and excited pulse, are aggravated in nervous patients; the apprehension of pain and the fear that something terrible is going to happen is much more common with women than with men, and it is permissible, therefore, to attribute the exaggeration of these symptoms to nervous excitement rather than to any untoward effects of the drug. Tuffier illustrated this fact in an operation which I saw him perform on a young man of 23 years for an omental inguinal hernia, with adhesions. In this case 2/3 of a grain of cocain was injected and the patient lay as quiet and indifferent as to what was going on as he would had he been reclining in a barber's chair.

The temperature present in a large proportion of cases is undoubtedly due to a mild form of sepsis, the infection being carried in by the needle as it passes through the skin. If this explanation is correct, the needle devised by Dr. Leonard Corning, in which he passes a smaller needle through a trocar thrust into the skin, would tend to avoid, if it did not completely obviate, the possibility of infection. The same object could be accomplished by the little procedure suggested by Dr. Bodine, of first incising the skin with a bistoury and passing the needle in at the bottom of the incision.

The practical question suggests itself: When is this method to be used in preference to general anesthesia by ether or chloroform? Accepting Tuffier's dictum that the method is absolutely safe, is it as well for the patient? Many men as well as women suffer profound shock even from the sight of blood; in many the constant apprehension lest they might suddenly suffer great pain is a serious element of depression; and the conversation of the surgeons, the consciousness of some unforeseen accident in the midst of an operation, are the unfortunate factors in a surgical case. It is true that occasionally, perhaps frequently, conditions arise in the course of an operation in which it is important to know the desire of the patient in reference to extending the originally contemplated operation, and of course the spinal anesthesia affords an opportunity for this.

Whether or not it will prove a safe method of anesthesia in cases suffering from heart complications, or kidney involvement, can only be determined by more extended experience. Tuffier has had one death in a series of over two hundred cases in which this method had been used, but autopsy confirmed the previous conviction that any other form of anesthesia was contraindicated.

From my experience with the method, and from what I saw and heard from Tuffier and his assistants at the Lariboisière Hospital, I believe that the method can be relied on to produce anesthesia in all cases demanding gynecologic or abdominal operations. The failures may be accounted for in various ways: escape of the solution through the puncture, too long bevel of the needle point, or to using stale solutions of cocain, or to boiling the solution for the purpose of sterilization. It is an accepted fact that boiling a solution of cocain destroys its potency to a greater or less degree. Tuffier uses a solution of cocain prepared in the laboratory. The cocain is first dissolved in sterile or distilled water, then sealed in glass bulbs and subjected for one hour on two successive days to a temperature of 175 F. This solution may be drawn from the bulb directly into the syringe or poured into a sterile glass and drawn into the syringe from it. Van Horn & Co., at my instigation, have had some bulbs made and have placed on the market a solution of cocain sterile and ready for use. Tuffier declares in his latest article on the subject, that he regards the method as absolutely safe. He does not hesitate to declare, however, that its safety depends on the most rigid asepsis in every detail. This, I think, we are all ready to accept. The great danger is that in carelessness in some of the many details unfortunate consequences may follow and the method be brought into disrepute.

Dr. W. W. Keen, of Philadelphia, has successfully substituted, in at least one case, beta-eucain for the cocain solution in his use of the method, on the ground that this drug can be boiled when in solution without impairing its efficacy, and that it is less toxic than cocain, and therefore safer.

It may be said that in gynecology there are both psychologic and esthetic considerations why the method should not be used, but in appropriate cases it offers a means of anesthesia when general anesthesia may be positively contraindicated. I shall continue to use it in my clinical work and thereby contribute my experience, as far as it may go, to determine the actual and relative value of the procedure.

PURPURA HEMORRHAGICA OR SCORBUTUS?

A CLINICAL SKETCH.*

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Since encountering the case shortly to be detailed the writer has been inclined to the belief that the condition known as purpura hemorrhagica is not a distinct morbid entity. Buck[1] describes it as a disease of the skin, characterized by the development of variously sized, smooth, reddish or purplish hemorrhages which do not disappear under pressure. Quain[2] calls it a diseased condition in which circumscribed effusions of blood take place into the upper layers of the cutis and beneath the epidermis, occurring with or without certain constitutional symptoms or in the course of various diseases, and attended by hemorrhages under and from the mucous membranes as well as into various serous cavities. Oliver[3] states that purpura resembles scurvy, differing from it in that it is not specially associated with deprivation of any particular kind of food. Struempell[3] points out the only difference between scurvy and purpura is that in the latter there is no hemorrhage from the gums.

The cause of purpura as an independent condition is not clear. It is generally believed, however, to be

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the result of an acute infection, most likely from the gastrointestinal tract. Efforts to discover bacteria in the ecchymotic spots have been unsuccessful. It has not been attributed, so far as the writer can ascertain, to errors or deficiencies in diet. By some it is considered as entirely symptomatic, by others, notably Oliver,[3] as a distinct morbid entity, due to toxic, mechanical or vascular causes.

Among the vascular causes of purpura, mentioned by Fruitnight,[4] are specific blood diseases, anemia, leucocytosis and jaundice; and the mechanical causes given are hepatic and cardiac diseases. These would rather have reference to the symptomatic forms than to the idiopathic.

Those who are the warmest advocates of the belief that purpura hemorrhagica is a distinct pathologic condition claim but little is known in regard to its pathology. Steffen[5] quotes Casel and Leloir as having found in scorbutus and morbus maculosis an extensive endarteritis, hyaline and fatty degeneration of structure, narrowing of lumen, hypertrophy of the endothelium and secondary thrombi.

It is also true that in an altered blood state, with normal vessel walls, there will be a passage of blood through them, or as Oliver[5] states, there may be an altered blood state and a disturbed nervous mechanism whereby nutrition of the walls of the arterio-capillaries are deranged and a hemorrhage results.

A purpura simplex is described clinically as appearing in the form simply of petechial spots everywhere, without much prodroma, beyond perhaps a slight indisposition, the first symptom of consequence being the appearance of the hemorrhages. Generally there is a quick recovery. Purpura hemorrhagica has been described as a severe purpura simplex. Steffen records 128 cases, of which 32 were personally seen. Of these 128 cases there were 40 deaths.

Scorbutus has perhaps been more closely studied than any other disease, especially since Northrup first called the attention of the profession of this country to it. Since then a great number of cases have been reported, and the collective investigation of the American Pediatric Society has greatly added to our knowledge of it.

It was early described as a condition of malnutrition which affects the capillaries, allowing the blood to escape from the vessels, producing gingivitis or spongy gums, hemorrhages and collections of blood.[6]

The classical symptoms presented are the following;[7] spongy bleeding gums, swellings and ecchymoses about the joints, hemorrhages from the nose and occasionally from other mucous membranes, extreme hyperesthesia and often pseudo-paralysis of the lower extremities. In addition there is generally a cachexia with marked anemia.

The cause is essentially dietetic, generally one of the proprietary foods being used exclusively, or the continuation of one article of diet to the exclusion of all others, which is deficient in some element necessary to the child's nutrition. The improvement under an "antiscorbutic" diet is almost magical and is universally seen in all cases.

CASE—W., aged 2 years and 7 months, was the second of three children; was breast fed until about one year of age, after which time he was fed at the table and given a general diet. He was subject to frequent attacks of vomiting and diarrhea, as often as every two or three months, from which he generally recovered quickly and apparently perfectly. He had no trouble with his teeth, which appeared at about the usual time. There is no history of a "bleeder" in the family, either in near or remote connections.

On Nov. 21, 1899, he was first seen by Dr. C. H. Stine, the attending physician, through whose courtesy I was later called to see the child, and to whom I am indebted for the details of the child's early history. At the time of this visit by Dr. Stine the child had a diarrhea, with mucous stools containing some blood. This irritation of the bowel was found to be due to a quantity of canned corn which had been eaten the day before. This was removed by free catharsis and by irrigation of the bowel. On light diet, irrigations, and a mild astringent he was discharged cured on the 26th.

He was not seen again until December 11, when Dr. Stine was again summoned and found much the same state of affairs as before, the digestive disturbance this time being due to oatmeal which had been freely eaten and which was evidently undercooked, it being passed undigested. Castor-oil was administered as before, the stools then containing some mucus. The child was cross and peevish, but had no temperature. On the fourteenth he was seen again; there was considerable diarrhea, stools frequent, which were thin, green and contained mucus and blood.

About this time there appeared a few petechial spots on the legs and thighs; co-incidently there appeared a tenderness of the ankles and a slight fusiform swelling. This was followed in a day or so by pain in the knees and an inability to walk. The gums were spongy and bled upon the slightest irritation, the lips and teeth were covered with dried blood. Very soon the thighs, buttocks and back were thickly covered with purpuric spots varying in size from a five-cent piece to areas larger than a silver dollar. There were a few scattered spots on other parts of the body. The stools continued to contain blood and mucus; there was considerable prostration and restlessness with some fever, reaching 101 to 103 at times.

He was seen first on December 22 by the writer in consultation with Dr. Stine. There had been but little fever for several days previously, the prostration increased, and there was great restlessness, with anorexia. There was considerable irritation in the bowel with frequent small movements accompanied with a good deal of straining. The child was markedly cachectic, the pallor being somewhat intensified by his auburn hair.

The diagnosis was made of scorbutus. He was given calomel, followed by bismuth and tannalbin, with orange juice and broths. The orange juice was taken greedily, the broth only after considerable persuasion. His condition improved for twenty four hours very materially, the diarrhea and tenesmus ceased and he seemed much more comfortable. On December 24 the temperature rose to 104.5 F., the breathing became much more rapid and there was some cough. Auscultation revealed very high pitched breathing over the bases of both lungs posteriorly, which gradually increased in intensity, approaching bronchial. He died in the early morning of the 27th.

Milk was not given at this time, because of the great bowel irritation, but it was our intention to begin its administration as soon as the bowel irritation had subsided.

Bearing in mind the points as detailed above, we have, clinically, a typical case of scorbutus, presenting the cardinal symptoms as detailed by all authorities; spongy, bleeding gums; fusiform swellings at ankle-joints; hyperesthesia; pain and inability to walk; hemorrhage from the bowels; petechial spots and ecchymoses all over the body, especially the lower extremities and lower portion of the trunk; diarrhea and considerable temperature.

The symptoms presented were also those of purpura hemorrhagica, as mentioned in the beginning of this paper. As the child had been fed at the table upon a more or less general diet, the case could hardly have been scurvy, as Crandall and others state that children who are allowed to eat at the table and have a very general diet never develop scurvy. Bearing in mind also the findings of Casel and Leloir, the similar path-

ologic findings in scorbutus and morbus maculosis, we are more at sea than ever as to the proper classification of this case.

As the child had not been fed upon an exclusive diet for a long time, though presenting the symptoms of scorbutus, taking the view of the authorities above quoted, it could hardly be classed as scorbutus. The joint symptoms being much more pronounced than generally described as being present in purpura hemorrhagica, and there being bleeding gums, which, according to Struempell, is not common to purpura, leaves it out of that class.

The occurrence of pneumonia, with the rapid dissolution, prevented the complete response to the "anti-scorbutic" diet, which we believe would have occurred, because of the temporary improvement for twenty-four hours before the onset of the pneumonia.

From a study of these subjects, then, it is the belief of the writer that purpura simplex, an occurrence of petechial and ecchymotic hemorrhages in the skin, is never an idiopathic disease; that purpura hemorrhagica, the disease in which there are hemorrhages into the skin, from the mucous membranes, subperiosteal and into the serous cavities, is not an independent condition, but is a modified form of scorbutus. It is due to, perhaps, a one-article diet, or to an ill-directed general diet, with a consequent development of a malnutrition, athrepsia or marasmus as a forerunner to scorbutus.

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DISCUSSION.

DR. J. P. C. GRIFFITH, Philadelphia—It has been my conviction for a good many years, and it has been my constant habit of teaching that many of the diseases in which we have purpuric eruptions and certain other cutaneous manifestations, shade into each other. I do not mean to say that they are all forms of one disease, for I do not know that; only that I have noticed this curious way in which they shade into one another. For instance, take that disease ordinarily called purpura rheumatica, in which we have with the purpuric eruption a swelling of the joints. In many of the cases there is rather a decidedly urticarial eruption. Certainly the name purpura is here a misnomer, for purpura is by no means always the most marked symptom. Another affection which is closely allied to urticaria on the one hand, and more remotely to purpura on the other, is that curious affection, angioneurotic edema. We note, too, the form in which the purpuric eruption is very well marked, but in which there are also curious visceral complications. I refer to Henoch's purpura. I have sometimes thought certain of the varieties of purpura might be allied to scurvy, but I tried treatment by dietetic measures with no result whatever.

After all, "purpura" is just such a word as jaundice, and jaundice is only a symptom. The causes of the purpuric eruptions we do not know as yet. We must remember that we can have a purely symptomatic purpura eruption, as in cases of profound sepsis, and in cases of advanced marasmus, and is then an indication of impending death. Further study may perhaps teach us what these various causes of pupura are, but the relationship of the different purpura affections is certainly not much understood at present.

DR. J. LOVETT MORSE, Boston—I think we must admit at present that our knowledge of so-called purpura is very limited. What we do know is that purpura is a symptom, and not a disease. This symptom is due to some change in the blood-vessels, and this change may be the result of various causes. These causes may be bacterial invasion, or the presence in the circulation of bacterial substances, probably tonics, or of other chemical substances, probably not toxins, or malnutrition. That is about all we know. As to scurvy being due to a single cause—food—it seems to me to have been disproved; it is much more probable that it is due to many causes. Food, however, is undoubtedly the most important.

DR. A. C. COTTON, Chicago—I think we should not overlook the fact that sponginess of the gums does not necessarily indicate scorbutus, though it is one of the conditions obtaining in scorbutus. Purpura does not specially indicate scorbutus. I believe sponginess of the gums in this relationship is partly an accident, for it obtains when there are no other evidences of scorbutus. That it is a dietetic disorder, or due to that, may be true enough, but that we should insist on calling a case scorbutus because of the sponginess of the gums seems to be no more necessary than that we should call it scorbutus because of the purpura. Hemic conditions have been generally held to be responsible for purpura. As Dr. Griffith has well said, purpura is an accident of certain conditions of the circulation found on the approach of death. The old term "necremia" may still be used to explain one of the etiological factors of purpura, that is a condition of the blood giving rise to purpuric spots.

DR. BURNS—I wish to speak of the case of an adult who had had in childhood two attacks of purpura hemorrhagica with bleeding from the mucous surfaces. The first attack followed a fall from a horizontal bar when he was a boy of 9 or 10 years. At the time I saw him he was about 26 years of age, and had had malarial chills. He insisted on going about in spite of having chills on alternate days. The blood destruction was very great, and there were very free hemorrhages from the mucous surfaces. He did not have very much fever or distress. The purpuric eruption was of a bluish cast. I do not recall at present the condition of the gums. I mention the case because malaria, as a great blood-destroyer, may be one of the etiological factors. We have a good deal of gingivitis without the purpura and hemorrhages from the mucous surfaces, except from the gums.

DR. HENRY E. TULEY, closing discussion—My principal reason for reporting this case, was that the discussion might bring out the present difficulties of differentiating scorbutus and purpura. I believe, as stated in my paper, that the term "purpura hemorrhagica" should not be used, and that the conditions ordinarily described under that name should be classed as scorbutus. I am in accord with Dr. Griffith when he says that ordinary purpura, like jaundice, is merely a symptom, and that the name should not be used in the classification of disease. That purpura may occur without any alteration of the blood-vessels I believe is true, also that purpura may occur as the result of an alteration of a blood state, and not necessarily of a change in the blood-vessel wall. The sooner we recognize that purpura is a symptom, and not a disease, and that cases of so-called purpura hemorrhagica should be classed as scurvy, the more quickly will we arrive at a better understanding of this subject.

DIABETES MELLITUS IN CHILDREN.

A REPORT OF TWO CASES.*

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The etiology of this disease in children, due to its rarity, is obscure. A few years ago Stern had collected 117 cases which had been reported in medical literature. Between 30 and 50 years of age, the proportion of males to females affected is about 3 to 2, but at the extremes of life this difference tends to disappear. Heredity plays an important part in its causation, while a family history of insanity, phthisis or gout is frequently obtainable. The patients generally belong to the wealthier classes; the Jews are often the sufferers.

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The immediate causes are variously stated to be: Injuries of the nervous system, especially of the floor of the fourth ventricle; lesions of the pancreas, of the liver, and of the kidney. Its occurrence as a sequel to some infectious diseases, such as rheumatism, typhoid fever, diphtheria, malaria, and syphilis, has given origin to the microbic theory of diabetes.

Normal blood contains .05 per cent. of sugar, and the urine of a healthy person contains traces. Ten times as much sugar is found in the blood of diabetics, while their urine contains from 2 to 15 per cent.

In 1849 Bernard proved that the liver contains sugar after death, and he inferred that the liver was a sugar-producing organ, an inference which has since been substantiated. Carbohydrates are absorbed as sugar, stored as glycogen in the liver, and reconverted into sugar to meet the demands of the system. Pavy showed that sugar can be artificially produced from proteids, and assumed that the body can also do this. The sugar which is put into circulation by the liver is stored as glycogen in the muscles and used up when the muscle is in action. This is proved by the loss of glycogen in a muscle which has been exhausted by tetanic contraction, e. g., after strychnin poisoning. Whether in diabetes the increase of sugar in the blood is due to an overproduction by the liver, or to a diminished consumption in the muscles, is still a debatable question. If the elimination of carbon dioxid in diabetes were below the normal, we would have a convincing proof that less sugar was consumed than in a healthy person, and that our efforts must be directed to increase the consumption. But repeated experiments have failed to show this.

Efforts have been made to prove the so-called nervous origin of diabetes. This theory is based on the fact that glycosuria often follows injuries to the nervous system; for example, to the cardiac and solar plexuses, to the nerves of the liver, and to the various parts of the brain and spinal cord. Diabetes has been caused experimentally, by puncturing the floor of the fourth ventricle—diabetic puncture—but diseases of this locality, although met occasionally, are not very common. Other experimental lesions have been followed by glycosuria, the glycogenic power of the liver being abnormally stimulated for the time being; but as a rule these effects are only transitory.

In 1877 Lancereaux advanced the theory that the pancreas was affected in all cases of diabetes. Latterly, extirpation of the pancreas in dogs, with resulting glycosuria, has helped to support this view. Still more convincing is the fact that no diabetes follows when a small portion of the pancreas is left, or is grafted into the muscles of the abdomen. But why should the pancreas have such an influence on the excretion of sugar? Lepine suggested that the pancreas secretes a sugar-destroying ferment, but the exhibition of pancreatic extracts has had no action in controlling the disease. Two months ago MM. Lepine and Boulud[1] reported that the urine of diabetics contains a diabetogenous substance which produced an intense glycosuria when injected subcutaneously in dogs and guinea-pigs. Further experiments on this subject ought to prove interesting.

Robert Saundby, in speaking of the duration and prognosis of diabetes in children, says: "In children and young persons diabetes is an acute and rapidly fatal disease, lasting only weeks or months, or at most one or two years, but even in children cases have been known to extend over five, six, or more years." Other authors agree with him in this hopeless outlook. A very few cases have been reported cured, but these are generally regarded with suspicion.

The following are the histories of two children in one family who have been under my care:

On Feb. 23, 1900, I was called to see the first patient, who complained of pain in the joints, fever, and palpitation of the heart. She had been sick for two days. The family history was as follows: The father had had an attack of articular rheumatism some ten years ago, but had recovered without sequelæ. The paternal grandfather and an aunt on the father's side had died of tuberculosis, and the paternal grandmother of cancer. The patient's mother has had several severe attacks of asthma, and probably has tuberculosis, but refuses to be examined. The maternal grandmother died of tuberculosis, but the rest of the mother's family are healthy. There is no history of insanity or nervous diseases on either side, and none were ever known to have diabetes. There are four children in the family, and all have adenoids and large tonsils. The urine of every member of the family was examined, but no sugar was found except in the two children whose histories are given.

Case 1.—M. F., female, aged 9. Patient is a pale, thin child, fairly well developed and nourished, rather small for her age, but seemed to be bright and intelligent. She complained of pain in the left shoulder, arm, and hip. The joints were not swollen, but slightly reddened, and the limbs could not be moved freely on account of pain. There was a rash on the body and legs, dark-red in color, looking like purpura around the painful joints, and like measles at some distance from the joints and on the right leg. The eruption was burning in character and not itching. Her temperature was 100.5 F., respiration 32, and pulse 132, full and strong. The apex-beat could be seen distinctly, even at a distance. The heart sounds were clear. The bowels were regular, no vomiting, and no pains in the stomach. Lungs, spleen, and liver were normal. The tonsils were enlarged and the patient breathed with her mouth open. Urination was frequent, and the child wets the bed at night. There was marked thirst. The case thus far appeared to be one of peliosis rheumatica. Salicylate of soda was prescribed, and cold compresses were ordered to quiet the heart's action. The urine passed that morning was of a pale straw-color, with a specific gravity of 1040; it contained no albumin, but 5.1 per cent. sugar. At first this was thought to be a temporary glycosuria, but on telling the mother at my next visit that the child had sugar in the urine, she informed me that another one of her children, a boy of 5 (Case 2), also had sugar in the urine, according to the statement of a physician three or four months before. On February 24 the patient was again seen, and the rash had disappeared from the legs and body, but the neck and arms were now covered. The pain had entirely disappeared and the joints appeared to be perfectly normal. The temperature had fallen to 99 and the respiration was normal, but the pulse was still 132. Cold applications to the heart were continued. She passed 64 ounces of urine during the 24 hours; specific gravity 1040. On February 25, rash was present on forearms and face, but was of a lighter shade; pulse was 114 and heart's action less tumultuous. No adventitious heart sounds heard. On February 26 the rash was still present on the face and head, but the rest of the body was free. Pulse was 110; temperature and respiration normal; specific gravity of urine 1042; su-

1. Gaz. hebd. de Med. et de Chir., March 28, 1900.

gar 4.9 per cent. On February 27 the rash had disappeared entirely and there were no signs of any constitutional disturbance. Pulse was 96 and specific gravity of urine 1044. The appetite, which had remained fairly good, now increased, while urination was not so frequent, but still copious. During the last three days no carbohydrates had been allowed; nothing but milk, beef tea, and soft-boiled eggs had been given.

On February 28, pulse had fallen to 72, and specific gravity of urine 1036; general condition good. On March 2, patient felt very well and showed no signs of any trouble, except that her appetite and thirst were abnormally developed. She had a craving for bread, which, however, was not allowed to be satisfied. Codein and bicarbonate of soda were substituted for the sodium salicylate, and the patient allowed to go out into the open air. No desquamation had occurred. Her weight was 55 pounds; specific gravity of urine had increased to 1044, and still showed 5 per cent of sugar. The diet had been increased, and she was allowed small pieces of toast in addition to other nourishing food. From this day, however, she was put on a strict anti-diabetic diet, and all carbohydrates were interdicted. The effect of this was to reduce the specific gravity from 1044 to 1028 on March 6, and the sugar to 2.8 per cent. on March 15. Carbohydrates were now allowed in small quantities. On April 1 she voided only 48 ounces of urine, and did not wet the bed at night as she had done previously. Urine was 1040 and contained 4 per cent. of sugar. On April 17, her weight was still 55 pounds, and the amount of urine voided was 332 ounces; since then she has been passing the same quantity daily. On May 7 her weight was 54 pounds, and her urine contained 5.2 per cent. of sugar.

At present her condition is as follows: Her weight has fallen to 53½ pounds, but her condition otherwise is excellent. She is bright and runs about a great deal. Her complexion is clear but sunburned; her hair is rather coarse, a family trait, which, however, is said to be a frequent condition in diabetes. Her tongue is clear and healthy looking; some of her teeth are in bad condition. The lungs are absolutely normal, but the heart's action is slightly irregular. Her bowels are regular; her appetite is good, but not as voracious as it was. She voids on the average 32 ounces of urine daily, which has a specific gravity of 1040 and contains generally about 5 per cent. of sugar. Her general condition being so good, all medication was discontinued, while a moderately strict anti-diabetic diet was continued.

CASE 2.—F. F., male, aged 5; a bright child, well developed and well nourished. He had been troubled with large tonsils, which had been removed three years ago. He still breathes with his mouth open, but does not have the choking spells which had been so common before the operation. There are some adenoid vegetations in the pharynx at present. About eighteen months ago he was run over by a bicycle and severely hurt, although I could not ascertain the exact nature of the injury, except that he was hurt internally. In November, 1899, he suffered from general malaise and pains in the back. Kidney trouble was suspected and his urine examined. Neither albumin nor casts were found, but quite a large amount of sugar. On February 23 I saw him for the first time, and nothing appeared to be wrong with him. His urine was examined the next day; it had a specific gravity of 1044 and contained 5.6 per cent. of sugar. His weight was 47 pounds, and he passed about 32 ounces of urine daily. The bowels were regular. He was put on a moderately strict diet. In March he had an attack of measles, with quite a severe bronchitis, but made a good recovery. Since then he has been doing very well. On May 7 his weight had fallen to 46 pounds, and he passed 24 ounces of urine, which had a specific gravity of 1040 and contained 4.8 per cent. of sugar. At present he weighs 45 pounds, looks well, and he voids on the average 24 ounces of urine daily, which has a specific gravity varying between 1036 and 1034, and contains between 4 and 6 per cent. of sugar.

These two cases are interesting for several reasons. The well-marked family history of tuberculosis on both the maternal and the paternal side bears out the view that tuberculosis predisposes to diabetes. In neither of the cases do we know how long sugar has been present in the urine, a fact which is to be regretted. In the boy's case we have the history of an injury sustained a year before sugar was first noticed in the urine. Whether this injury has any etiologic significance or not is, of course, uncertain. It is unfortunate, also, that the physician who treated the boy after the bicycle accident is now dead, for he would have been able to supply several important details as to the nature of the injury.

From the coincidence of the eruption, the joint pains the fever, and the tumultuous heart action there is no doubt that the first patient had peliosis rheumatica in addition to diabetes. It is a question whether these two conditions came on simultaneously or whether the diabetes existed before the rheumatic attack.

CONCLUSIONS.

1. Diabetes occurs more frequently in children than is generally supposed.

2. Uranalysis is just as important an element in the scientific diagnosis of disease in children as it is in adults. It is to be regretted that the general practitioner rarely realizes this fact.

3. There is a possible etiologic connection between peliosis rheumatica and diabetes. The pathogenesis of both conditions is so obscure, however, that speculation on this question can only point out a direction for further research.

773 Forest Avenue.

DISCUSSION.

DR. HEINRICH STERN, New York City—As to the frequency of diabetes mellitus in children, according to the statistics of the New York City Board of Health, which I have collected and carefully gone over from 1889 till 1899, there occurred: 4 deaths under 1 year old, 1 death at one year, 2 deaths at 2 years, 2 deaths at 3 years, 4 deaths at 4 years, 11 deaths between 5 and 9 years, 17 deaths between 10 and 14 years, 38 deaths between 15 and 19 years.

Out of a grand total of 1867 deaths from diabetes mellitus for the period of eleven years, the mortality from this affection in childhood and early adolescence, when it almost always terminates fatally, being 79, forms about 4.25 per cent of all the deaths from the disease during the period in question. The period of puberty seems to exert no specific influence on the causation of diabetes mellitus nor on its lethal termination. Of the 13 instances of death which took place under 5 years of age, 3 were in females. The 66 other deaths were divided equally over both sexes; 33 occurred in males and the same number in females.

The pathogenesis of diabetes in children, it seems to me, is not obscure in the measure as is commonly supposed. In my opinion, the glycosuric condition of children, in most cases, has nothing whatsoever to do with the true diabetic state in the adult. The glycosuria, I opine, is rather due to some developmental anomaly, especially of the medulla oblongata and other portions of the nervous system. Death in these instances

rather supervenes on account of the developmental structural inefficiency than on account of "diabetes," though the symptom-complex may point to a fatal termination by the latter. The disease in childhood, in most cases, does not seem to be caused by any metabolic disorder as such, and I do not hesitate to predict that in the near future the life of many children affected with "diabetes mellitus" so-called, will be saved by simple operative procedures within the skull.

DR. LOUIS J. LAUTENBACH, Philadelphia—In connection with this paper, there is a subject which seems to me to have come up in every Section I have attended this year. It may be a fashionable complaint, or it may be a common disease which has not been generally recognized. I notice the author referred to adenoids as a possible factor in the causation of his cases. I was surprised that no mention was made of whether or not he removes them. These adenoids in the vault of the pharynx seem to be an expression of some deep general condition, probably tubercular, syphilitic or scrofulous, the exact nature of which is not apparently known as yet. In all of the cases of phlyctenular conjunctivitis I have seen there have been adenoids in 40 per cent. or more of the cases. This may give us a clue to the nature of the disorder. We specialists take the ground that whenever we know adenoids are present it is our duty to remove them promptly. Whether adenoids are a part of a strumous condition or not I do not know, but I do know that their presence does induce a series of other phenomena which should be avoided whenever possible, and the only thing to do is to remove the postnasal obstruction at once.

DR. LOUIS FISCHER, New York City—I had the pleasure of seeing at my clinic several months ago the cases reported in the paper. I examined the urine and found a large percentage of sugar. A very important point, it seems to me, and one brought out in the paper, is the fact that those cases which are tuberculous or of a type formerly called scrofulous, are the ones in which we look for these abnormal conditions. It was only two or three weeks ago that I undertook to examine a series of urines from children in private practice, and in the urine of 61 children I found one case that showed a transitory glycosuria. Sugar was found in the urine from this child on three different occasions, though the child presented no symptoms whatever pointing to ether diabetes mellitus or insipidus. The child has a little athrepsia and general malaise, yet the urine contained 1 per cent. of sugar. It would be well, I think, for us to make it a rule to examine the throat and the urine of every child coming to us for examination.

DR. HEINRICH STERN—May I ask by what method the uranalysis was performed?

DR. FISCHER—By Fehling's test and the fermentation test.

DR. EDWIN ROSENTHAL, Philadelphia—I have only seen two cases of diabetes mellitus, and the impression that I gained was that it was the first beginnings of life that started diabetes. In one of these children, 5 years of age, having a good family history, the diet had been an artificial food. The child died at the age of 5 years. The second case was the grandchild of a professor of obstetrics in Philadelphia. The child was a girl. The prognosis in these cases is invariably bad. The question of consumption, syphilis and similar disorders does not enter at all into these cases. I myself thought the diabetes in these cases was the result of the method of bringing up the children. One of the children had never been nursed, having been entirely fed artificially.

DR. J. C. DE VENNEY, Harrisburg, Pa.—I wish to state that I have seen a case similar to the one mentioned by the last speaker. It had been fed on malted milk and an artificial food until 4 years old. It was a well-marked case of diabetes.

Pathogenesis of Acute Deafness.—Baginsky relates in the *Arch. f. Kindhk.* xxviii, that a girl of 13 presented the clinical picture of cerebrospinal meningitis with complete deafness in two days. The latter persisted after recovery. She succumbed three months afterward to sepsis from a malignant carbuncle on the lip. At the autopsy no traces of the supposed meningitis could be discovered, but indications of a bilateral lesion of the labyrinths were unmistakable. The organ of hearing had been completely destroyed by endostitis ossificans, which had manifested itself clinically as cerebrospinal meningitis.

MALARIAL HEMOGLOBINURIA.*

WILLIAM BRITT. BURNS, M.D.

DECKERVILLE, ARK.

We are accustomed to using this term—the principal symptom of the disease—because it overshadows all others. Under ordinary circumstances it makes the diagnosis, and the layman knows its import.

The synonyms are, black-water fever (Das Schwarzwasser Fieber), hematuria, hemoglobinuric fever, swamp fever, icterohematuric fever; fièvre bilieuse hématurique, first described by French naval surgeons stationed at Nossibe, a French settlement off the northwest coast of Madagascar.

The pathology and pathologic anatomy of malarial hemoglobinuria is in all essential particulars the same as—and in fact is—that of a malignant malaria, with the addition of hemoglobin in the urine and rapidly increasing jaundice. There is always a history of one or more paroxysms—chills and fever—with insufficient or no treatment.

A cachectic may have had no active manifestations of malaria for months, and after undue exposure or fatigue, have a violent hemoglobinuria and die in twenty-four hours. Usually, however, there are two, three or four, or even more paroxysms, immediately prior to the hemoglobinuric symptoms. There may or may not be a cold stage; my cases have all shown a short mild cold stage with distressing prolonged fever, sometimes very high temperature, more often not to exceed 103-4 F. When the fevers have been of short duration the urine has cleared up rapidly; this has been no assurance though that at the end of twelve or twenty-four hours longer an exacerbation of all symptoms would not come on in an aggravated form.

The general appearance of the patient, if seen early after the coloration of the urine, is one of more or less excitement; the face is blanched as if in extreme shock; the eyes follow every movement; the speech is catchy and respiration sighing; he may be fairly quiet, more often there is restlessness, at times tossing over the bed, seeking a comfortable place; yet he seldom complains of pain. Indeed, the rule seems to be that there is very little pain, and if asked will answer that there is no suffering; but he goes on sighing and groaning. I have seen persons with a notably clear skin and scleræ pass black water with a first or second paroxysm and in twelve hours present the color of saffron. The spleen and liver are nearly always palpable below the costal margins and are extremely tender; some tenderness exists over the kidneys, sometimes extreme backache. Nausea and vomiting are usually present, but it is only rarely that it is so prominent that the stomach has to be abandoned in treatment altogether. These symptoms obtain far more often in acute malaria than in hemoglobinuria. The vomited matter may be at first a straw color, but it soon becomes green, dark-green, brown, almost black, blue-black and grumous, sometimes offensive. After icterus comes on, the saliva, perspiration and lachrymal fluids are loaded with bile pigment, which responds to bile tests. The urine is from a poke-berry juice to a black-coffee color. All of these fluids, and the feces when diluted, show a saffron stain and deposit of bile salts on linen. Consequent upon repeated and accumulating infection we have the destruction of red corpuscles by the malarial parasites, the liberation of hem-

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oglobin along with the malaria toxins into the blood plasma.

Under ordinary circumstances the liver cares for the hemoglobin by converting it into bile pigment, and the remnant corpuscles by elaboration into young corpuscles, or the complete destruction of same. But there are metes and bounds beyond which the liver will not stand. Besides its metabolic functions, constructive and destructive, its other functions must be safeguarded, and it must also protect itself from a flank movement from the intestinal tract, from which source come our intestinal toxemias. One-sixth, or even one-third, of all the red corpuscles may be destroyed by one pernicious paroxysm, this coming when the hemopoietic function is overthrown; the liver now fails to care for the free hemoglobin here liberated, and a hemoglobinemia obtains. It must not be understood that each parasite-destroyed cell contributes its normal quota of hemoglobin to the existing hemoglobinemia; it is considered that the greater percentage is consumed and converted into proper tissue and pigment by the parasites.

It is suggested that there is set free at sporulation a certain hemoglobin-dissolving substance, which hitherto has acted as a digestive agent in the assimilation of the coloring matter of the red cells and which retains after liberation its digestive function, continues to act as a hemoglobin solvent, and so dissolves out hemoglobin from healthy cells, or at least, probably, unstable young, and vulnerable red corpuscles. May it not be possible to recover some of the hemoglobin from the malarial pigment thus set free by the same agent?

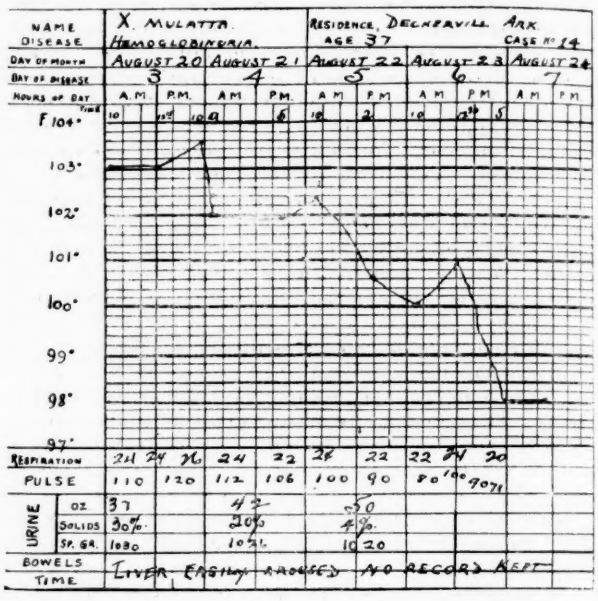
We know that there is a distinct poikilocytosis; at times there does not appear to be a sound corpuscle in the patient's body. The erythrocytes are terribly misshapen, crenated, spiculated, tailed and buckled, shriveled and otherwise deformed; there are microcytes, megalocytes and shadows, and after the second or third hemoglobinuric paroxysm, the vessels are empty and relaxed, and the blood so deteriorated that it is a difficult matter to get a smear. The blood does not exude, even after large punctures. The adhesive quality is lacking to the extent that the ordinary adhesion of the lens through immersion oil drags the cover-glass from the slide. Here the field is practically colorless, save the débris and a few ghost-like corpuscles; the wonder is that there should ever exist a hemopoietic power sufficient to restore such a blood to normal. There is now added to the destruction wrought by the plasmodia *per se*, their toxins. Moreover, the presence of bile salts and bile acids induces a cholemia, which latter condition, says Oliver, comes on before the appearance of pigment or icterus in all forms of jaundice.

If we now reflect upon the toxicity of the bile salts, we may be able to explain in part the appearance of such a quantity of hemoglobin in the urine, which is not satisfactorily accounted for by parasitic destruction *per se*. We find that even in aqueous solution of 2 per cent. bile salts kill one kilogram of body-weight; the chlorate of sodium in dose of 54 cg. and chlorate of potassium in dose of 46 cg. Bouchard says that during twenty-four hours a man makes by the activity of his liver alone, enough poison to kill three men of his own weight.

Indeed, a cholemia alone may produce a hemoglobinuria; injection of bile salts into the circulation has produced hemoglobinuria in animals. Moreover, there are various solvents which find their way into the blood-current and which will take from the erythrocytes their hemoglobin, or a part at least, without accomplishing the destruction of the protoplasmic body. The extreme pallor of the uninfected red cells is a striking evidence that there are hemoglobin solvents in the circulation which do not otherwise injure these bodies.

Maragliano explains paroxysmal hemoglobinuria on the idea of a lessened resistance to the ordinary environments, and especially to the toxic plasma.

The effect on the liver of this great hemolysis may be polycholia—filling of the gall-bladder; injection of the bile capillaries, even to their finest rootlets. The liver cells are thinned, capillaries are dilated and in places


NAME X. MULATTO. RESIDENCE, DECATURVILLE, ARK.
DISEASE HEMOGLOBINURIA. AGE 37 CASE No 14
DAY OF MONTH AUGUST 20 AUGUST 21 AUGUST 22 AUGUST 23 AUGUST 24
DAY OF DISEASE 3 4 5 6 7
HOURS OF DAY A.M. P.M. A.M. P.M. A.M. P.M. A.M. P.M. A.M. P.M.
TIME
F 104°
103°
102°
101°
100°
99°
98°
97°
RESPIRATION 24 24 26 24 22 28 22 22 24 20
PULSE 110 120 112 106 100 90 80 100 90 70
URINE OZ 37 42 50
SOLIDS 30% 20% 4%
SP. GR. 1030 1021 1020
BOWELS
TIME LIVER EASILY PALPABLE NO RECORD KEPT

This mulatto had been passing claret-colored urine for over forty-eight hours before I was summoned. He was very weak, his skin saffron-colored, and his eyes injected with bile. Fever and hemoglobinuria were continuous. I at once gave calomel gr. xvi, turpentin, gtt. xx, to be repeated gr. ii and gtt. ii, respectively, every two hours until the urine should clear up. I also gave quinin dihydrochlorate, gr. xv, hypodermically at 10 a. m. and 2 p. m. on the 20th.

Urine.—Claret-colored; containing blood and granular casts, amorphous granular matter and hematin crystals.

Blood.—Very pale; red cells almost devoid of color. Spiculated, tailed and buckled pigmented leucocytes, crescents and ovoids. There was seen one presegmenting form.

At 10 a. m. on the 21st the urine was clearing up slowly. Calomel was replaced by sodium hyposulphite and quinin sulphate was given in 7-gr. capsules every three hours, while the turpentin was continued. Raw eggs were also given.

At 2 p. m. the urine was clear, and the blood showed pigment and pigmented leucocytes. The urine remained clear, and the temperature gradually decreased. He was dismissed on the 23d.

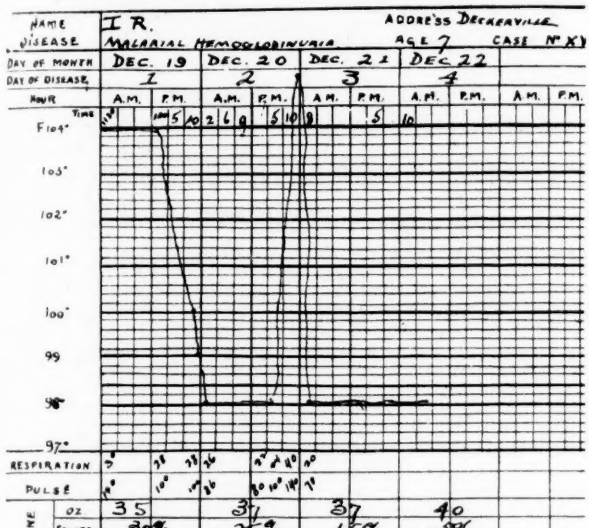
This is the first case I have ever seen before frost. Cases 11, 12 and 13 have been reported, all very much the same as this. (See Trans. Section on Materia Medica, Pharmacy and Therapeutics, Columbus meeting; *Louisville Med. and Surg. Jour.*, Aug. 1899.)

are replaced by fat drops. Necrobiotic change occupying rather extensive areas, are seen. The vessels are filled with pigmented leucocytes, dead parasites, remnants and débris, and blocks of yellowish-black pigment; Kupffer's cells and certain endothelial cells undergo multiplication by karyokinesis. Thus we have the hepatic tumor; this has a blackish, leaden appearance and is soft on section.

The splenic tumor may be merely palpable below the costal margins or it may reach below the navel and to the anterior superior spinous process of the ilium. Ordi-

narily, however, the enlargement does not assume the great proportions seen in malarial cachexia. Post-mortem, the surface of the spleen is dark, sometimes black; on section the gland tissue is also found to be dark; the parenchyma of the organ is much softened; the tarry pulp may be washed away with quite a gentle stream of water. The pigment of malaria is here found within the endothelium of the arterioles and capillaries in minute grains, often in actual blocks; we find aggregations of pigmented leucocytes, dead and breaking-down parasites forming actual thrombi and actually occluding the vessels. The spleen and bone-marrow have the distinction over all other organs of containing pigment in the cells of the parenchyma outside and away from the blood-vessels. In these latter organs pigment is contained in ordinary leucocytes, but in the splenic vein this substance is included not only in leucocytes but also in certain large white cells identical with those occurring in the spleen and evidently of splenic origin. The rôle of the spleen in infectious diseases has lately been gone over by Courmont and Duffau, Blumreich, Jacoby and Kurloff. Their deductions appear to be, that it makes no particular difference whether the spleen is present or not. Splenectomy seems to contribute to an increase in the bactericidal powers of the blood, while its antitoxin properties are unimproved. Ligation of the splenic vessels, the spleen being allowed to remain, appears to subserve the same end as does splenectomy on experimental infections. One of the striking changes in the blood after splenectomy is an increase in the number of leucocytes, especially the lymphocytes. This lymphocytosis is said to produce the protective powers of the blood seen in the cutting out of the circulation the spleen. It is explained again, that the spleen during health retains the disintegrated leucocytes and other cells. This detritus is regarded as being closely related to the alexins, and after splenectomy it accumulates in the blood and thus increases its bactericidal powers. Have we not occlusion of the splenic vessels in a hemoglobinuric spleen sufficient to act in a like manner, or in a considerable degree at least, as would a ligation of those vessels? May not this account in part for the lymphocytosis in hemoglobinuria?

The decrease in the bile pigments and the increase of the amount of bile secreted, as demonstrated by A. Pugliese, and the experiments of Tedeschi showing that the livers and bone-marrow in animals deprived of the spleen are richer in iron than the livers of normal animals, would show the close chemical relation of the two organs, and further the hypothesis of a grave occlusion of the splenic vessels in hemoglobinuria, as suggested. The condition would also contribute to the existing polycholia. The kidneys in an early stage of the disease are enlarged and congested; the tubules are blocked with hemoglobin infarcts; the cells are loaded with yellow pigment grains, and the capillaries with black malarial pigment. If the patient survives three or four weeks he is said to die of uremia. The appearances are then those of the large white kidney. The severest cases of nephritis of malarial origin are found in hemoglobinuria. The urine between the attacks may be per-



This patient had a chill, December 17. Quinin in No. 2 capsules was administered every four hours until hemoglobinuria came on.

Dec. 19: At 11.30 a. m., the patient was comparatively comfortable, and slightly drowsy. The urine was dark. A smear of blood was taken and while examining it, I was hurriedly summoned. I found the urine the color of coffee. Both this and the first specimen responded to the guaiac-turpentin test.

The first blood showed plasmodia. A second smear taken after the urine colored up showed: plasmodia, estivo-autumnal parasites in all stages of development, moderate poikilocytosis, a number of lymphocytes, leucocytes greatly increased, polymorphonuclear and mononuclear phagocytosis.

The lips and gums were pale, also the tongue, which is large and flabby, with a thick, white coat and a tinge of brown over the back part. Icterus notably mild.

At 1:30 p.m., calomel gr. x and turpentin gtt. xx—turpentin in a beaten egg—were administered, to be repeated every two hours in doses of gr. i and gtt. ii, respectively, until the urine cleared up. Quinin dihydrochlorate, gr. viiss, hypodermically, was given at 1:30, 5 and 10 p.m., adding strychnin, gr. 1/120 to each injection. At 10 p.m. the urine was still black.

Dec. 20: At 8 a.m. the urine was clearing up nicely. Calomel was replaced by sodium hyposulphite solution, gr. xx, every two hours. Beef juice was ordered—a half teaspoonful every two hours. Quinin bisulphate in hot solution was ordered—gr. x every four hours.

At 5 p.m. the dihydrochlorate, gr. viiss, was given hypodermically to avoid paroxysm. A tepid bath, containing a little sodium bicarbonate for a cleanser, followed by hot whisky and quinin, was given. Sponge and normal salt enema every four hours.

At 11:30 a.m. the urine was clear; turpentin was discontinued and at 5 p.m. the condition was practically normal.

At 10 p.m. the urine was quite dark.

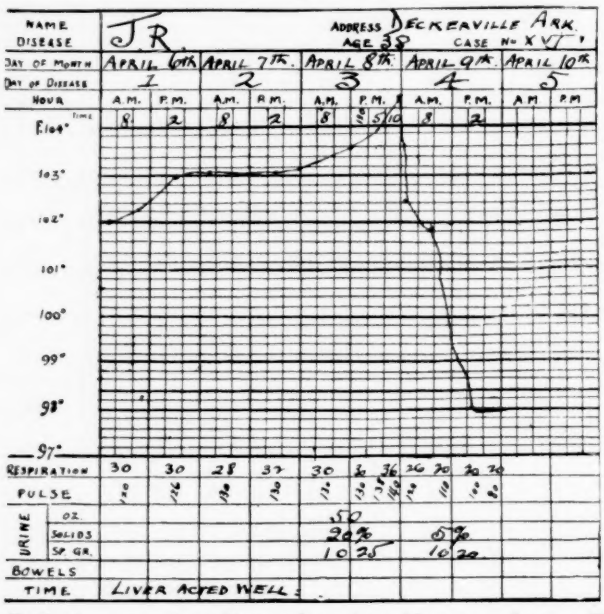
The blood contained numerous hyalin bodies, crescents and round bodies; leucocytosis was marked. There were a few lymphocytes; phagocytosis was marked, and there was an abundance of pigment and pigmented leucocytes. Quinin dihydrochlorate, gr. xv, was given in solution. This was vomited and repeated immediately and retained. At midnight the fever was subsiding rapidly, and the urine clearing up slightly. Turpentin, gtt. xv, was given at 10 p.m. and repeated in 2-drop doses every two hours until urine cleared.

Dec. 21: At 8 a.m. the urine was clear, and there was no fever. The blood contained free pigment, pigmented leucocytes and debris, also two old crescents. Quinin bisulph., gr. v, and strychnin nitrate, gr. 1/200, in solution was ordered. Sodium hyposulphite and beef-juice to be given every two hours and a bath and normal salt solution every four hours.

Dec. 22: At 8 a.m. patient was put on tonic and light diet.

It will be noted that at 5 p.m., Dec. 20, quinin, gr. viiss, was given hypodermatically, yet the paroxysm came on at 10 p.m., at which time quinin, gr. xv, in solution by the mouth was administered and vomited, repeated at once and retained, and cinchonism was profound. This may be evidence of precipitation of the alkaloid by the alkaline tissues.

fectly or practically normal, but with the attack it becomes, as before mentioned, from a poke-berry juice to a black-coffee color, somewhat turbid and smoky in appearance, and when allowed to stand precipitates an abundant chocolate-like sediment. This sediment is chiefly amorphous granular matter, disorganized corpuscles, with minute hematin crystals. Urea is generally increased; albumin is in abundance and globulin may be seen on close testing. The specific gravity ranges between 1015 and 1030, is usually acid in reaction, but oftentimes faintly alkaline, and the volume



Patient was a cigarette smoker since 10 years of age. He had had bronchitis for several days, together with some pain in the chest. There were no other signs of pneumonia, and hot applications to the chest relieved the pains. Quinin, gr. v, every hour did not control the fever, but a purgative acted well.

On the morning of the 8th the urine was of a pokeberry-juice color, and responded fully to the guaiac-turpentin test for hemoglobin. The blood showed poikilocytosis, leucocytes increased, estivo-autumnal parasites in all stages of development. The red cells crenated, tailed and buckled; phagocytosis. The urine showed a large quantity of granular and blood casts; amorphous granular matter, hematin crystals, squamous and columnar epithelium. Icterus was intense. Quinin dihydrochlorate, gr. xv, and strychnin, gr. 1/40, were given hypodermically at 8:30 a.m., and the same was ordered by the mouth at 4 and 10 p.m.

At 9 a.m. on the 9th the urine was clear and the fever rapidly abating. Quinin, gr. v, in solution was ordered for 10 a.m. and gr. x for 10 p.m. At 2 p.m. fever had disappeared.

Here quinin internally failed to control fever, which responded at once to it hypodermically. Icterus disappeared rapidly. The patient was up on the morning of the 10th for breakfast, smoked several cigarettes and went to bed at noon with pain in the chest. I was called and found what developed in a few hours into a violent pneumonia, from which he died on the 15th. There was no return of the hemoglobinuria.

may be increased. There are casts, principally dark granular ones, though hyaline casts may be found. Many of the casts are made up of hemoglobin. Rarely a few scattering blood-corpuscles are noted.

Hemoglobinuria occurs in the old residents, usually after the second or third year, rarely in new-comers, more often in males than in females. This is probably on account of the greater exposure of the male. Out of 16 cases seen by me, 13 were males and 3 females, the oldest being 38 and the youngest 5 years of age. Dr. McElroy, of Stovall, Miss., shows a record of 40 cases, of these there were 30 males and 10 females.

Hemoglobinuria is extremely rare in infants. Fish reports one case in a child of 14 months; McElroy, one at 12 months. It is said that the full-blooded negro is immune to the disease. Easman, Eyles and Quartey-Papafio have recorded hemoglobinuric attacks in native Africans; Krause, of Memphis, reports one case in a "pure negro." Of my 16 cases, 3 were very light mulattoes; of Dr. McElroy's 40 cases 13 were negroes, 2 of which he writes to me were full-blooded negroes. There are, however, observers of decided repute who maintain very stoutly that the disease does not obtain in negroes of full blood.

The parasitology of hemoglobinuria, so far as my observations go, is estivo-autumnal pure and simple; and I believe this is the consensus of opinion; there are those, on the other hand, who hold to a special parasite, and others appear to have observed a special bacillus in the blood and urine.

Paroxysmal and toxic hemoglobinemias aside from the parasitic agent are accounted for in the same manner as that of malarial origin, i. e., any agent that will set free more hemoglobin in the circulation than the liver can care for will set up a hemoglobinemia —this in turn is thrown off at the most convenient outlet by the renal epithelium—a hemoglobinuria. Paroxysmal hemoglobinuria is precipitated by exposure to cold, or to the application of cold to the hands, etc.

Toxic hemoglobinuria is said to be produced by certain drugs, among which are cited: chlorate of potassium, carbolic acid, naphthol, carbonic oxid and quinin. To all of these, save quinin, I objected in my paper on hemoglobinuria, read before the Section on Materia Medica and Therapeutics, of this Association, at Columbus, Ohio. Chlorate of potassium is being used in large doses by my confrères and myself for pytalism, as recommended by the elder Gross; hemoglobinuria does not follow, nor does any other toxic effect. Carbolic acid, because a poisonous dose produces a coagulation of albumin and such a rapid and violent inflammation of the mucous lining of the stomach, that absorption is prevented to any great extent, and death is so sudden that hemoglobinuria could hardly obtain. Naphthol: Bouchard says it would require a half-pound to produce death in a healthy man weighing 150 pounds. Carbonic oxid combines with the hemoglobin of the red cells and renders them unfit for conveying oxygen, but does not disturb the continuity of the cell—no hemoglobinemia, no hemoglobinuria.

TREATMENT.

Of my first 6 cases, 2 died, 1 of these latter never having had a movement from the bowels, despite large doses of calomel and frequent enemas. Whether this was a paresis of the bowels, due, as Dr. Jones, of Memphis, thinks, to malarial toxemia, I am not prepared to say. Calomel, turpentin, eliminants, hot applications and supportives formed the treatment. I am persuaded that this gave a good percentage of recoveries. No. 7 bade fair to recover; urine was clear for 72 hours; but the patient relapsed after gormandizing; collapse followed with suppression of urine and passing of feces; yet his kidneys partially recovered, and he became strong enough to start on a journey home, but died on the way. No. 8 got on nicely without quinin. Nos. 9 and 10 died. No. 11, a little girl of 5, had no chill in two or three months; then she had a chill at 3 a.m. I was

not called until 8 a.m., at which time she passed the first black water. Calomel, strychnin, hot applications and mustard bath were employed. Urine cleared up perceptibly and symptoms subsided, but at midnight urine darkened again, and remained so the following day, though voided in large quantities. Icterus became marked. Vomiting was distressing, and restlessness pitiable; delirium came on at 5 p.m.; another chill occurred and urine became black; there were plasmodia present. I finally gave quinin, also normal salt solution by hypodermoclysis. It was too late to be of benefit. Nos. 12, 13, 14, 15 and 16 were given the same treatment plus quinin. All recovered nicely. Nos. 12 and 13 were the same person in two separate attacks. I now depend more on quinin. Nos. 12, 13, 15 and 16 took quinin in large doses before the hemoglobinuria came on. Larger and better cinchonism, however, proved to me that quinin is not such a destroyer of red cells, and the decided phagocytosis would appear as tolerable evidence that the movement of the white cells is not very unfavorably interfered with, but that it does rapidly destroy and banish from the circulation the malarial parasite, and thus closing out the hemoglobinemia and necessarily the hemoglobinuria. Of course the eliminants throw off the toxic environment, which contribute very considerably to the hemoglobinemia. Other agents are methylene blue, nutmeg and tannic acid. The first I have used in one case, but very little of it was retained; vomiting was excited every time it was given. I regard, though, methylene blue quite favorably in cachexia.

DISCUSSION ON PAPERS OF DRS. LAZEAR, WOLDERT, CRAIG, JONES AND BURNS.*

DR. WILLIAM KRAUSS, Memphis, Tenn.—I must say that the five-minute limit cripples me completely and it is impossible to say much or do justice to the discussion of all these papers. I had desired to discuss some of the earlier papers, but since they are mostly in line with my own findings, I will leave them to take issue with my friend Dr. Burns. I feel a sense of humiliation for the writers of my adopted country, except the Johns Hopkins School, when I read the allusions, and incorrect allusions at that, to this syndrome of malarial origin—I object to its being called a symptom. It is sincerely to be hoped that they will revise that part of their books in future editions. The fatal dictum "malaria ergo quinin" has sent countless hundreds to their graves. I have attempted to harmonize existing views, not having one of my own to defend, and think I have constructed a working hypothesis of the origin of the "disease," if you please. There is not the faintest analogy between this and the hemoglobinurias due to the ingestion of drugs in non-malarial subjects. Dr. Burns has given us its symptomatology. What are the principal known facts in regard to malarial methemoglobinuria? 1. Hemolysis can not be caused by adding quinin to the blood of a hemoglobinuric, in vitro. 2. Hemolysis never occurs in acute malaria. 3. Active infection by malarial organisms bears an indifferent ratio to the severity of the attacks; indeed, it may be absent in fatal cases. 4. Quinin may, in some cases, produce hemolysis in an individual to-day and not to-morrow; while in others the hemolysis is permanent, and if quinin is persisted in it will destroy the patient. 5. Hemolysis may be present in rare cases in the absence of a quinin history. 6. We know, as a positive fact, that in all cases where the plasmodia existed early in the attack, they rapidly disappear from the peripheral circulation under the influence of the hemoglobinuria; post-mortem, the parasites are always entirely absent. 7. Occasionally we find mild cases in which the plasmodia survive the attack. 8. The constant evidence of the estivo as the only parasite. 9. The entire absence of any evidence of a specific malarial toxin.

Now, what do we find as the determining factors in hemoglobinuria? 1, persistent neglect of an old infection; 2, superimposition of an added acute infection; 3, some gross indiscretion; 4, constipation and biliary stasis resulting in the resorption of bile; 5, change to a better climate, better location, better surroundings; 6, anti-malarial treatment. Here, then, we have two opposing factors producing similar results. Noeggerath's dipping experiments with Texas fever cattle had to be abandoned because a large percentage of these developed murrain with destruction of the animals. This is quite a parallel case. We must suppose then, that, after a while, in persons living in malarial climate a symbiosis is established, which is an exact balancing of two opposing factors to the extent of producing apparent health, a disturbance of which precipitates a paroxysm; if the potential is high, quinin or some other agent will produce a grave paroxysm; if low, it may not do much or any harm.

Bignami tries to make the point that probably hemoglobinuria is produced by the precipitation of the pigment in the epithelium of the convoluted tubules, the epithelium breaking down and causing a retention of hemolytic substances in the circulation. I have here some photo-micrographs apparently refuting this idea. They show absolutely no pigment in the epithelium of the convoluted tubules; it is in a state of cloudy swelling or even further degenerated; there is stasis in the vasa recta, the glomeruli and Bellini tubules are the seat of the pigment, which is in coarse particles; there is obstruction of the loops of Henle. In none of my preparations is there anything which can be regarded as even resembling a plasmodium.

Hemoglobinuria is probably an exaggeration of the tissue reaction which ordinarily is conservative and salutary. Proof is shown in the destruction of the parasites. All this is in accord with the clinical proof. I have seen 13 consecutive recoveries under the "eliminative" treatment; no such record can be shown under the quinin therapy. (Three more cases and no deaths at time of revision of this proof.)

Active malaria is not an essential factor. The plasmodicidal effect of the hemolysis is greater than that of any amount of quinin. No death from the "disease" can be ascribed to the malaria per se. There is no logical indication for quinin except in the rare cases in which the parasites survive the attack. Quinin is dangerous during the attack, though it is the best prophylactic.

DR. T. J. HAPPEL, Trenton, Tenn.—I could not, even if I desired to, review the ground so thoroughly gone over; others are more competent to do so than I. As a general practitioner, living in a malarial section, I desire to state that we deal with malaria nine months out of each year. I shall not attempt to discuss any of the special papers, but I do want to emphasize what was pointed out by Dr. Jones, that too little attention is paid to the clinical history of the disease and we are attempting to learn too much from discussions on theory. We are gradually turning the study of disease over to the laboratories. We will soon have no real practitioners. Soon we will have men carrying away blood to the laboratory to ask the question: "What have we got?" I think we are going to extremes. We certainly have been able during the past years to diagnose malarial fever, typhoid fever, etc., and we are able to do so to-day without the microscope. There are far abler men in the profession than I who are prepared to state that the results of treatment were as good then as under the present advanced knowledge of the disease. If the gentlemen will come South at the invitation of Dr. Jones they will find a different type of mosquito, which does not convey the disease. In the South the poison hangs on every bush. Our children do not get malaria from mosquitoes, which bite them through almost the entire year.

DR. W. S. THAYER, Baltimore—Perhaps the most important point in Dr. Lazear's communication is the fact that he has brought before us easy, practical methods of making and applying Romanovsky's stain. This is a valuable clinical advance. All who use the microscope know how hard it often is

* The papers covered by this discussion, other than that of Dr. Burns, are that of Dr. Lazear, October 13, p. 917; Dr. Woldert, October 13, p. 933; Dr. Craig, November 3, p. 1139, and Dr. Jones, November 3, p. 1148.

to find small hyaline malarial parasites when but few are present. Proper investigation of the fresh blood specimen may, under these circumstances, require a great deal of time and patience, much more than is possible for the active practitioner to give. By these methods, however, it is not difficult to make a few dried cover-glass specimens at the time of the visit, and to stain them later. The results are so clear and sharply defined that one can readily detect parasites when only few are present.

I must confess that I am not satisfied with the existence of a distinct quotidian malarial parasite. It may be possible that in some instances the cycle of our estivo-autumnal parasite may be barely as short as twenty-four hours, but I do not believe that there is a distinct quotidian species. The view which we first held, based entirely on temperature charts, that paroxysms due to quotidian parasites were common with us, I have been compelled to abandon some years ago, and I am inclined to agree with Gautier and Ziemann that the estivo-autumnal parasite is one whose cycle lasts ordinarily about forty hours. In the recent publications of the Italian observers, they speak with considerable precaution with regard to the possibility of the existence of a distinct species of quotidian estivo-autumnal parasite. It seems to me that on careful analysis of these charts one observes that the paroxysms every third day begin at approximately the same hour, while those on alternate days vary slightly more. This is extremely suggestive as indicating a double infection with parasites, the cycle of which is of about forty-eight hours.

Our observations in Baltimore have led us to agree entirely with the views of Dr. Jones concerning the frequency of malarial nephritis in the negro. The vulnerability of the negro's kidneys, as well as of his lungs, appears to be especially marked. The frequency and high mortality of pneumonia in the colored race, as well as of nephritis, as compared with the white, is striking.

With regard to hemoglobinuria, I can not speak from experience. In Baltimore malarial hemoglobinuria does not occur. From a study of the literature there can be little doubt, however, that in those cases of hemoglobinuria where active malarial parasites are present, quinin does good. There is apparently also no doubt that in certain instances where the parasites are present at the onset, the mere occurrence of the paroxysm is sufficient to destroy nearly all, if not all, the organisms present. This is in all probability due to the fact that the infected corpuscles are especially vulnerable and thus prove subject to dissolution in an attack, the parasites, which are set free, being immediately destroyed. It has further been definitely shown that some attacks of hemoglobinuria occur after an acute malarial infection has entirely passed by, when no parasites are to be found in the blood.

There is no doubt that true quinin hemoglobinuria does occur, though the direct causal action of quinin is probably rarely observed. There is also some reason to believe that in individuals who have taken quinin for very long periods of time there develops sometimes a predisposition toward this manifestation. I should give quinin in any case of hemoglobinuria where active parasites were in the blood. I should abstain from giving it if they were not present.

DR. HENRY D. DIDAMA, Syracuse, N. Y.—In 1852 we had a swampy region in the neighborhood of a salt plant, and there was a good deal of ague; there were about 200 cases in one year. The treatment, at that time, was in giving calomel and jalap to get the liver in good order. I was a younger practitioner then than now, and I thought the complaint was the result of some poison. There was a quantity of mosquitoes, but I did not blame them. The ague is not there now, but the mosquitoes are there just the same.

DR. ALLEN A. WESLEY, Chicago—In reference to the excellent paper given us by Dr. Jones, of Tennessee, in which he makes the positive statement that the negro does not have chronic malaria, I beg to disagree. It was my privilege, while in Cuba, to see over 1000 cases of malaria among the negro soldiers, and I have seen chronic malaria among them. There are now, in Chicago some of these soldiers who have returned from Cuba and who are suffering with malarial cachexia. Shortly before I left Chicago for this convention a former soldier came to me presenting a coated tongue and a cold, clammy skin, which had a peculiar ashen hue. He also complained of having had dysentery and an aching throughout his body and chilly sensations, which were sometimes followed by fever. I put him upon quinin and mineral acid and he improved. Further, I wish to state that while serving as surgeon in Cuba, not having any microscopic appliances in the hospital, I sent to the United States for cover-glasses, on which I made a number of blood smears, using every care in sterilization. These specimens were sent to Dr. A. J. Coey, of Chicago, who has made an especial study, both in Vienna and at Johns Hopkins, of the parasite of malaria. His report showed that the blood in many of these specimens contained crescent bodies, and evidences of malignant and chronic malaria. Thus it will be seen from the clinical picture given, and the scientific data here presented, that it is a mistake to say the negro does not have chronic malaria.

It seems to me that all subjects coming before this body should be considered of sufficient import to demand the most careful consideration of every phase thereof and to require the careful collection of all scientific data pertaining thereto before any generalizations are made, especially when those generalizations effect a whole people. I wish to enter my protest against medical men making positive statements without any, or at most, very little scientific data on which to base the same. In regard to the negro's susceptibility to kidney disease, I have only to say that in our command of over 2100 negroes we had over 1500 cases of malaria, which predisposes to kidney disease, but we had only one death directly traceable to the kidneys.

DR. N. S. DAVIS, JR., Chicago—I should like to ask Dr. Howard whether he has information about the migration of anopheles. The disease often disappears from localities and reappears in them many years later. For instance, in my boyhood days malaria was not uncommon in and about Chicago. During the first ten years of my practice there a case of ague was rarely seen, unless it was brought to the city from a considerable distance. However, when the lagoons were made in Jackson Park and the grounds were prepared for the World's Fair, and when excavation began and was in progress for the Chicago drainage canal, malaria appeared among the laborers in these localities and gradually spread, and still clings to neighboring sections of the city. The drainage of the land about Chicago undoubtedly caused the disease to disappear. What has caused it to reappear? Was it because the anopheles were given a suitable place in which to breed, or was it due to their migration, and if the latter, what laws govern their migration?

DR. L. O. HOWARD, U. S. Dept. of Agriculture—There are no evidences to show any migration to a distance.

DR. W. R. TAYLOR, Wheeling, W. Va.—There is nothing that will live eternally but truth. Upon this rock let us build. I should like to call attention to the fact that if malaria is due entirely to the bites of mosquitoes every man who goes to the Klondike would be killed in a month. There is no region on the earth where these pestiferous insects are more numerous nor their bites more venomous. Yet, malaria does not exist there. In our city of Wheeling, during the months of August and September, we sometimes have countless hosts of these insects, and plenty of the anopheles or dapple-winged variety. A large part of the city is built on an island, surrounded by the waters of the Ohio River. The island ground is low, and part of it swampy, yet malaria de novo is never seen here at the present time. After the war with Spain many soldiers came back from the South and from Cuba literally saturated with malaria, but they did not prove to be sources of infection for our citizens, although the mosquitoes were here busily engaged in carrying the infection to our unsuspecting and uninfected citizens. Wheeling Creek runs through the central part of that portion of the city which lies east of the Ohio River. In the summer months this creek is little more than an open, stinking sewer; a perfect paradise for mosquitoes, but we have absolutely no malaria. These facts may be multiplied and elaborated ad infinitum.

What inferences must we draw from these facts. Mosquitoes may carry the plasmodium malariæ from the blood of a patient afflicted with malaria to one who is not, as flies may carry the tubercle bacilli from the sputum of a tuberculous patient to other persons and deposit it on or about them; they will not all become infected, only a very small percentage of them. Mosquitoes can not develop malaria de novo. Persons who are perfectly well may go into a malarial district in the early spring—before mosquitoes are hatched and developed—and work in the ground and contract malaria without ever seeing a mosquito. Foster defines malaria as "air tainted by deleterious emanations from animal or vegetable matter, especially noxious exhalations of marshy districts, capable of causing fever or other disease." This definition is in strict accord with all of our exact knowledge of malaria.

Dr. O. T. Osborne, New Haven, Conn.—I should like to emphasize Dr. Davis' point. I have had somewhat the same experience in New Haven that he has had in Chicago. Fifteen years ago there were a great many cases of intermittent fever. From that time until five years ago we had very little. In the center of the city there was almost none. Then they began to put up a number of large buildings, dug cellars, put in electric cars, which went all over the city; the streets were much dug up. From that time typical intermittent fever reappeared. New Haven is accustomed to a few mosquitoes; we have very little trouble with them and seldom do we find it necessary to screen against them.

Dr. R. C. Newton, Montclair, N. J.—I should like to ask if it is true, as has been frequently asserted, that malaria does not originate in localities which are over 700 feet above the sea-level. And if this popular belief is well founded, what shall we say about the presence of the anopheles? Is it found at an altitude of 700 feet or over above the sea-level?

Dr. W. S. Thayer, Baltimore—With regard to the effect of the mosquito bite one should remember that it is not the number of mosquitoes which bite one, but the kind of mosquito, and the result depends entirely on whether or not it is infected. The great mass of mosquitoes all over the country are perfectly harmless, as far as malaria goes. There is only one genus of mosquito which is capable of transferring the disease and this genus inhabits those regions which we know as malarious. Members of this genus are, however, present in other regions which may not generally be known as malarious but which may be shown to be potentially so, as was the case in the epidemic which has recently been referred to, following the advent of Italian laborers. And in such districts when one looks carefully into the history of the region he will probably find that malaria has, at one time or another, existed. There is really no evidence to show that malaria can be acquired through the gastro-intestinal tract. There is simply no positive evidence that any epidemic of malaria is due to an infected water-supply.

Dr. L. O. Howard, U. S. Department of Agriculture—In answer to the question asked regarding the occurrence of malarial mosquitoes at an altitude above 700 feet I would state that they have been observed at an elevation of 1000 feet and over.

Dr. Albert Woldert, closing the discussion—Experiments have shown that the length of time the anopheles remains infected after it has bitten a case of malarial fever is about three weeks. After this length of time has elapsed it is believed the insect can not inoculate man with malarial fever.

Referring to the subject of malarial hemoglobinuria, in my opinion the etiology is not definitely known. Many cases of hematuria of doubtful origin have been spoken of as malarial hemoglobinuria. A distinction should be made between hemoglobinuria and hematuria by the use of the microscope. At one hospital I know of, over 2000 ounces of quinin had been given to patients in which the clinical diagnosis of malarial fever had been made, without producing hemoglobinuria. Of five cases of supposed malarial hemoglobinuria all took quinin and all recovered.

Dr. William Britt. Burns, Deckerville, Ark.—I came to this meeting to especially make a plea for harmony in the treatment of hemoglobinuria. As my reports show—of course, 16 cases does not show a large clinical report—more than one-half the cases died under the treatment, without quinin. It is the custom for many physicians in the southern states to use no quinin in the treatment of hemoglobinuria. One year I was losing all my cases and I determined to try one case, and see if he would live if I used quinin. This patient had considerable jaundice and an enlarged spleen, a typical case, in short, wherein those, who fear quinin, would have withheld that agent. He had been given quinin sulphate in large doses by the mouth, and on the third day developed hemoglobinuria. How easy it would have been to have arrived at a quinin-hemoglobinuria. Quinin saved that man's life, I believe; I began at once, not to withdraw, but to get quinin into the circulation, giving 7½ grain doses every four hours of the hydrochlorate, intra-gluteally, and to my surprise he got well; moreover this same person was treated successfully with quinin in a second attack some months later. Ever since, I have treated every case with calomel, turpentin, hot applications and beef-juice I have also been using the normal salt solution, per rectum, which I find replenishes the blood and allays thirst. This mode of treatment, with quinin applied, in the past five cases has proved successful. I object to the term post-malaria in any form; I know of no post-malarial condition, except convalescence and sound health. I find estivo-autumnal parasites in all cases of hemoglobinuria, and knowing the great hemolysis wrought by these agents, I would doubt the wisdom of withholding the one agent which would eliminate the plasmodia from the blood. I no longer fear quinin in hemoglobinuria.

MASSAGE OF THE EYEBALL.

PRESENT STATUS AND VALUE, WITH THE CONSIDERATION OF WHAT DISEASES OF THE EYEBALL MAY BE FAVORABLY INFLUENCED BY THIS THERAPEUTIC MEASURE AND WHAT ARE THE BEST MEANS OF ITS APPLICATION.*

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Massage is one of the oldest remedies known to ophthalmic surgery, and it may well be believed that a method of treatment not only in vogue thousands of years ago, but also adopted and retained by almost every school of medicine, must have special virtue.

Having used ocular massage extensively for many years, I gladly avail myself of this opportunity of exchanging with my colleagues opinions as to its efficacy.

First, I wish to speak particularly of the simple and not of the instrumental variety, such as the direct rubbing with pieces of cotton wool or some fabric mounted on a convenient shaft, the *tapottement* (or tetanization) of Maklakow, the use of sounds, with or without buttonheads, and other devices. In the main, indirect massage (Pagenstecher, Michel) with the pulp of the finger placed on the skin of the lids is to be preferred. Costomiris, formerly of Athens, who speaks enthusiastically of massage, believes that the best results are obtained by the direct rubbing of the finger tip or tips on the exposed cornea and conjunctiva. So far as the latter membrane is concerned, I believe direct massage is valuable, and in some instances decidedly preferable to the indirect method, but the stroking movements, with slight pressure on the exterior of the eyelids, are usually sufficiently efficacious, are certainly less difficult to carry out in practice, and are more readily borne by the majority of American patients.

It is necessary to say that the amount of force used, the length of each sitting, the frequency of the appli-

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cations, the strength and character of the remedial agent—if any—used with the rubbing, and the susceptibility of the patient, are prime factors in the successful employment of massage, and are quite as important as the selection of cases appropriate for this remedy. Let us consider these in the order stated.

In indirect massage the act should never of itself produce pain, and rarely more than a passing discomfort. I think little is to be gained by the employment of much force. If the lids are the parts to be treated, the patient should be told to look down in massaging the upper lid, and up in the case of the lower lid. In each instance, the other lid should be drawn away from the one undergoing massage. If the cornea is to receive attention, the patient should look straight forward. The duration of the séance must be varied according to circumstances; it should rarely exceed three or four minutes. The tip of the second finger I have found the best instrument for the application, as it can readily be used for all the movements of palpebral massage, circular, centrifugal, and centripetal. It is also well adapted to the to-and-fro pressure required to reach the conjunctival areas about the inner and outer canthi. Once daily to twice a week constitutes the range of frequency of these applications. It is better in most cases to perform a gentle, non-irritating massage of even ten minutes' duration daily than a rough, painful rubbing twice a week.

As to the strength and character of remedial adjuncts, and without discussing the action of massage, which forms no part of this paper, I have come to rely on variations of some half dozen remedies. When I desire to use massage for its own sake, as I usually do, I instill a drop or two of cod-liver or pure castor-oil, telling the patient to wink and move the globe about so as to thoroughly distribute the oil throughout the conjunctival sac before beginning massage. For the rest I greatly prefer oily solutions or mixtures to powders or collyria. When these oleaginous compounds are made perfectly smooth and of a consistency that permits of their ready distribution over the eyeball, it is surprising how little pain or discomfort is set up even by strong doses of such irritants as mercuric chlorid, silver nitrate, etc. This is probably due to the fact that massage has an anesthetic action, probably due to emptying the capillaries and lymph-vessels of their contents and to the continued pressure on the nerve endings.

Most observers find in mercurials of various strengths, combined with all sorts of oleaginous excipients, the most useful massage agents, and my experience coincides with theirs. I pass around for your inspection a brown ointment of this character that I have found very effective, and one that combines qualities of great value in ocular massage. It is nothing but the old citrine ointment—the ointment of the nitrate of mercury—made with brown cod-liver oil instead of lard-oil. This, after standing exposed, to get rid of irritating nitrous fumes, for a week or ten days to the air, but not to dust, may be further diluted with from 25 to 50 per cent. of cod-liver oil. It should be dropped from the end of a glass rod or silver probe into the lower sac. If the massage movements are begun at once, the smarting is very slight and transient, even when the stronger mixtures are employed. The subsequent action of the remedy can be modified as desired by the length of time, usually an hour, before it is washed off the eyelashes with warm water.

At the end of, or during the act, combinations of the remedy with the ocular secretions—especially mucus—should be coaxed out of the sac by small "dabs" of damp cotton, or, if watery or glycerin mixtures or solutions be employed, by the irrigating stream, and the stroking movements resumed until nothing further comes away.

I wish to emphasize the contention that one rarely gains anything by inducing a marked hyperemia of the scleral or ciliary vessels by using force or by the employment of very irritating adjuncts in massage. A little smarting, that passes off in five minutes; a temporary congestion of the already visible vessels, and, perhaps, some foreign body sensations are all that are justifiable. I might generalize by saying that the patient, half an hour after the lid friction, should not experience any added discomfort. It is evidently impossible for me to even enumerate the various diseases of the lid proper, conjunctiva, lachrymal apparatus, cornea, and of the interior of the eye, in whose treatment massage has many warm friends. In a general way its most satisfactory employment will be found in chronic diseases of the eye borders and substance, in almost all those subacute and chronic infections of the conjunctivæ that one commonly includes in the title "conjunctivitis"—with or without an adjectival affix or prefix—in the second stage of acute inflammation of the conjunctiva, in most forms of ulcer of and deposit in the cornea, and it may be employed for the temporary relief of glaucoma and in some forms of retinal embolism. It is not indicated in the early stages of "acute conjunctivitis" and of "keratitis," in all forms of true trachoma, in spring catarrh—although Costomiris and others dissent from this opinion—in diseases of the iris, ciliary body, lens, choroid, vitreous, or optic nerve. Finally, while I am very skeptical of its efficacy in the absorption of the connective tissue that composes the mass of a true cicatrix, I am convinced that, in young subjects, especially, it does lessen the opacity following ulcer of the cornea. If applied early it promotes the removal of the surrounding infiltrate that would otherwise remain. In the same way it is valuable in the treatment of interstitial keratitis.

USE AND ABUSE OF POTASSIUM IODID IN OPHTHALMIC PRACTICE.*

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Iodid of potash was first used medicinally by veterinary surgeons for the removal of splints from horses. Its efficacy in removing these osseous growths suggested its use for the removal of tumors and exudates from man. Its value in the cure of many tertiary syphilitic lesions soon became apparent, and it is slowly but surely forcing the medical profession to acknowledge that its use is not restricted to syphilitic diseases.

Many years ago I became convinced of its value in the removal of goiter. I recall a case many years since that forcibly impressed on my mind the efficacy of iodid of potash in cases other than syphilitic ones. I was in attendance on a little girl with pneumonia, but resolution failed to become established. The lung remained solid several weeks. The child was slowly but surely dying. The father, a physician, as well as myself felt helpless, and we called in council an old prac-

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titioner, who prescribed immense doses, as we thought, of iodid of potassium. The rapid improvement was most marvelous. It was such observations as this that led me to gain greater confidence in the use of the drug in the removal of exudates than my previous studies had led me to believe possible. It was while the above case was still fresh in my mind that two patients came at the same time, each having received a blow on the eye, the anterior chamber filled with blood. I determined to try the use of iodid of potassium to absorb the blood-clot in one, and let the other go without specific treatment. The blood-clot disappeared in five days from the case in which the iodid was used. In the other, remains of the clot could still be seen at the end of two weeks. While it is true that a single observation of this kind can not have much scientific value, yet my experience covering a wide variety of similar cases has confirmed me in the opinion that iodid of potash is of value in removing not only hemorrhages, but exudates of almost every kind as well.

I seldom meet patients who can not take the iodid. Sometimes I have discovered that they could not take small doses of the drug without discomfort, but could take large ones quite well. That there may be no misunderstanding, I shall detail at some length the manner in which I usually prescribe the drug. In the vast majority of cases I combine it with bichlorid of mercury as in the following prescription:

R. Hg. chlor. cor. ..... gr. i
Potassium iodid ..... ʒi
Tr. cinch. comp. ..... ʒii
Aquæ, q. s. ad ..... ʒiv
M. Sig. Teaspoonful three times daily in water after meals.

I use this as a menstruum for the administration of the larger doses, and give this prescription:

R. Potassium iodid ..... ʒi
Aquæ, q. s. ad ..... ʒi

with instructions to add 5 drops to each spoonful of the first prescription, increasing 5 drops additional to every dose, thus giving 45 grains the first day, 60 grains the second, 75 grains the third, and thus rapidly increasing the dose up to 500 grains daily. I urge the patient to drink an abundance of water, to eat all the appetite craves, and make no restrictions as to the kind of food. I also insist on frequent hot baths, which I deem most important. I caution the patient not to take the medicine if a full meal has not been eaten, and on the first indication of intestinal disturbance stop the drug entirely for a day or two, or if needs be, until the appetite returns. Administered in this manner, it is rare indeed that I meet a patient who can not take from 100 to 300 grains daily. It is surprising sometimes what enormous doses can be taken without any apparent deleterious effects. I have notes of a patient in the City Hospital who had been there some months with a diagnosis of diabetes. When I entered on my service I examined his eyes and found he had a choked disc, and made a diagnosis of brain tumor, and expressed the opinion that the sugar in the urine was due to the irritation of the tumor, probably near the floor of the fourth ventricle. Iodid of potassium was administered until the dose was increased to 900 grains daily, with complete disappearance of the sugar in the urine, and although this was nearly ten years ago, the patient is still living and enjoying good health. These large doses can not be taken for a long time, but should be pushed to the point of tolerance and then stopped entirely for a few days or weeks, if not an urgent case; in the meantime I administer mercury, iron, arsenic, strychnia, or other drugs, alone or in combination, as indicated, and then, if necessary, repeat the large doses of iodid as before. This way of administering iodid of potassium has proved most satisfactory in my practice, not only in syphilitic cases, but in many that were not diagnosticated as such. In cases in which the patients object to the taste of the drug, I have been in the habit recently of prescribing it in carbonated water, which covers the taste completely and apparently relieves much of the tendency to irritation of the digestive apparatus. I do not wish to be understood as saying that I never give small doses of iodid; indeed, I believe there are cases in which most excellent results may be best secured by small doses continued for a longer time. But I wish to make a plea for larger doses in many non-syphilitic cases, and express the opinion that as a routine practice less harm may be done by large doses given for a brief period than by smaller ones for a longer time.

Of course, the most brilliant results will be attained in cases of choked disc due to syphilitic brain disease, but I have resorted to this treatment in cases of optic neuritis of almost every variety. The urine should be examined, and in the presence of albumin the drug should be used with great caution. I also learned from sad experience many years ago that, in degenerative disease of the optic nerve such as we have in posterior spinal sclerosis, the use of the iodids will do great harm and often hasten blindness. I do not hesitate to give large doses in cases of optic neuritis in meningitis, tubercular as well as other forms of the disease.

I have also had good results in neuritis following injuries of the head, either due to pressure from blood-clots or exostoses following fractures, or effusion from localized meningitis. I have also found the iodid useful in relieving the headaches in cases of brain tumor other than specific ones. Some years ago we had a boy in the Cleveland General Hospital who suffered most intensely from headaches. Opiates always aggravated the pain; almost the entire materia medica was exhausted without avail. It was found that 50 or 100 grains of potassium iodid, followed by a hot bath, would give him relief for a week or two, and sometimes longer. He died suddenly after a hypodermic of morphia given by a physician called in in an emergency. The autopsy revealed a large tubercular tumor of the cerebellum pressing up into the floor of the fourth ventricle, which was enormously dilated, holding a pint or more of fluid. The iodid undoubtedly relieved the pressure, while the opiates increased it, and thus aggravated the headache.

I am tempted to report at length exceedingly interesting cases in which the drug has proved of unusual value, like one I reported recently to a local medical society, of a patient who became totally blind subsequently to cauterization of the turbinated bodies for hypertrophic rhinitis. Rapidly increasing doses of iodid were prescribed until 450 grains were given daily. Perfect vision was quickly restored.

It was not the purpose of this paper to discuss such cases, but rather the ordinary ones that come to our consulting rooms frequently. I have already intimated that I believe the drug to have a specific influence in absorbing blood from the anterior chamber, and I also have faith in its efficacy in removing clots of blood as well as exudates from the vitreous, where, as we are well aware, absorption is a much slower process. In all cases of choroiditis with exudation into the vitreous, I give a relatively favorable prognosis, at least I have no hesitation in encouraging my patient to believe that

with vigorous medication we can clear up opacities of the vitreous, thereby improving vision. This improvement is not alone in syphilitic cases. In cases of progressive myopia in which there is not the slightest suspicion of syphilis, I have witnessed the most marked improvement. Indeed, there is no case of choroiditis in which I would not give the remedy a trial with the expectation of benefit. I have notes of an interesting case of a school teacher with a large subhyaloid hemorrhage, presenting a beautiful picture of a thin layer of bright-red blood covering a large portion of the fundus. Notwithstanding the presence of albumin in the urine, large doses of the iodid were given, with the gradual clearing up of the hemorrhage and restoration of perfect vision. This was five years ago, and the teacher is still at work and apparently in good health.

I have not found the iodids of benefit in secondary syphilitic iritis. These cases are best treated with mercurials. On the other hand, I have found the iodids of great service in the treatment of idiopathic or rheumatic iritis—those cases in which we have great pain running a chronic course, often relapsing; in which the impairment of vision is out of proportion to the cloudiness of the aqueous; in which the pupilary area may be quite free from exudates; in which the eye is tender to the touch; in other words, a cyclitis rather than an iritis, or at least in which the ciliary region is quite seriously involved, with exudation into the anterior part of the vitreous. These are the cases that try our skill, but which often yield to large doses of iodid of potash and hot water used as taught by our ex-chairman, Dr. L. Connor.

Serous iritis, the punctated keratitis of the older authors, is always benefited by the iodids. In these cases, however, I have been contented to use smaller doses. Interstitial keratitis is peculiarly a children's disease, and always runs a chronic course, which can be greatly shortened by the judicious use of iodid of potash. The latter can be much more safely and much more conveniently given in relatively large doses for a short time, alternating with mercury and general tonics, repeating the iodid from time to time as the general health of the child permits. Interstitial keratitis in adults in my experience always runs a much shorter course than in children, due, I believe, to the fact that we can safely give the iodid much more vigorously.

There are a large variety of cases of extraocular paralysis involving the third, fourth, sixth, and fifth nerves, undoubtedly many of them syphilitic, but often due to other causes. It has been my custom to prescribe iodid of potash in large doses without spending too much time in making inquiries as to the etiology, as I believe that prompt and heroic treatment at the beginning is essential to success in the management of these cases.

I must confess that the use of large doses of iodid of potash has been disappointing in the removal of postoperative exudates; for some reason I have not had the courage of my convictions, and in very few cases of this kind have I ventured to give large doses. So many of these patients are old, or feeble, or illy nourished, or have already run a painful debilitative course, I have not been inclined to push the iodid to the extent that I have done in other cases. I can not say the results in such cases have been encouraging.

CONCLUSIONS.

1. Iodid of potash should generally be administered in rapidly increasing doses until from 1 to 500 grains are given daily.

2. The drug should always be given after eating, and well diluted with water.

3. Frequent hot baths are essential to the best results in the use of the remedy.

4. Not infrequently large doses will be tolerated when smaller ones can not be well taken.

5. The use of the large dose is not limited to syphilitic cases.

6. Large doses are indicated in: optic neuritis; ocular paralysis; choroiditis; serous iritis and in relapsing iritis; cylitis and interstitial keratitis.

7. It is contraindicated in gray atrophy of optic nerve and in most cases of postneuritic atrophy.

8. Albumin in the urine, generally speaking, is a contraindication for large doses of iodid.

9. Young children do not take the iodid kindly and it should be administered cautiously.

10. The remedy is of doubtful value in early syphilitic iritis.

11. Large doses are of doubtful utility in the removal of post-operative exudates, but should be given further trial.

DISCUSSION ON PAPERS OF DRS. WOOD AND BAKER.

DR. J. L. THOMPSON, Indianapolis—I fully agree with Dr. Baker, though it is true I have not given the very large doses he uses, being rather afraid, but in the future I shall certainly try it. Occasionally we meet with cases in which more than four or five grains will produce the most terrible symptoms, in other words, there is an occasional idiosyncrasy. I recall a case of brain tumor in a little girl seen some fifteen years ago, with impaired vision, headache and choked disc, who after treatment by potassium iodid was able to attend school for two years subsequently. An autopsy made later showed sarcomatous tūmor of the cerebellum.

Concerning the ointment which Dr. Wood recommends for use with massage I want to say that I accidentally stumbled on that mixture many years ago, in fact, before I went into the Civil War. Later, returning home, I found my friend, Dr. Williams, prescribing the same ointment, which he called the "brown citron ointment." The only objection to it is that ladies complain of its horrible odor. Concerning the use of massage in glaucoma, I have had several cases of hemorrhagic glaucoma in which I have used it, together with eserin and other remedies, of course. I think it would be well to give some of our patients an instrument like that suggested by Dr. Woods, because it gives them something that rattles. I wish I could give many of my patients some instrument that rattles or makes a noise while it is working.

DR. C. F. CLARK, Columbus—Since the Doctor calls for something that rattles, I have one to show him—presenting instrument. I have under my care a patient who consulted Dr. Ayres ten years ago and who has been a high myope since childhood. She has detachment of the retina, with complete loss of sight in one eye and partial detachment in the other. Her condition has improved greatly under potassium iodid. I only learned from her a few days ago that, before going to Dr. Ayres, she had presented to her this circular, which probably the older members of the profession are familiar with, concerning an instrument for reducing myopia. She had systematically produced massage with this rattling instrument for many years, and whenever she had to do some particular work she felt that she helped her eyes by pressing this on the lids. I have no doubt that with this instrument she succeeded in producing the detachment. I have tried it on my own eye and in one or two applications succeeded in making the eye ache for about two hours; I am myself myopic.

I believe in massage thoroughly for many diseases of the eye if properly applied, but it must be always guarded by the physician, and it would be a bad thing for the public to get the idea that by rubbing the eyes as the osteopaths do they could rub away disease.

DR. LEARTUS CONNOR, Detroit—There are two points I would like to speak of. I quite accept Dr. Wood's presenta-

tion on the subject of massage and I have found it extremely useful. The case related by Dr. Clark recalls to my mind the case of an old soldier who had lost one eye from myopia when the other was progressively failng. He went to Cincinnati to attend a grand army encampment, and while there a friend persuaded him to have one of these cups applied. It was applied once and he never saw afterward: from being a useful member of society he was converted into a blind man.

Respecting potassium iodid, I also favor large doses of it, but use it without bichlorid, and suspect that some of Dr. Baker's good results have been due to this attendant drug, which, however, is a different proposition. My method of using it is different from his, in that I usually prescribe it to be taken after meals in milk. I give it in drop solutions so that it may be increased by drop doses, each drop representing a grain. I was quite surprised to hear Dr. Baker say he found it intolerable to children, for in our Children's Hospital I have used it with great satisfaction, and they seem to take it better than adults.

I wish to say a word also in regard to subconjunctival injections to which Dr. Troncoso referred. In a number of these exudates the injections do assist materially in clearing of the cornea, but in other cases, no matter how many injections we have used, there has been only little benefit. As to the selection of cases in which subconjunctival injections would or would not be of benefit we have been unable to determine beforehand. It is necessary to try them, and if benefit results, very good; if not, we discontinue them. I would like to emphasize the remarkably quick relief from pain given in cases of iritis and cyclitis by these injections. I have seen many cases of these diseases in which the pain was excessive and in which no relief was obtained from other remedies, but they were promptly relieved by one or two injections of a few minims of normal saline solution.

Dr. C. A. Veasey, Philadelphia—I am quite sure that most of us who have had any experience with massage of the eyeball will agree with almost all Dr. Wood has said in his excellent paper. It is perhaps a question not so much of the employment of massage but of the manner in which it shall be employed that raises points of difference. In the service of Dr. De Schweinitz, at the Jefferson Hospital, it has been our custom for years to use it to assist in the removal of exudates found in the layers of the cornea and especially in interstitial keratitis. Formerly it was our custom to apply the massage ourselves, but in a large clinic that proves to be impracticable. We then tried to teach the patients to use it, but quite recently we adopted something of an innovation by employing a trained masseuse. Certainly in the few opportunities we have had to make observations since starting this we have every reason to believe the results are better than those obtained by previous methods. The substance which we have mostly used has been the yellow oxid ointment. A small portion is placed in the conjunctival cul-de-sac, and the lids being closed a number of circular movements are made with the tip of a finger on the upper lid, and after a short time this is followed by radiating movements from the center toward the periphery, and the sitting ended with a few tappings.

Dr. Frank C. Todd, Minneapolis—I believe in the use of potassium iodid for eye diseases and in strong doses, but I have not been able to use it internally as strong as Dr. Baker recommends. I believe I have been able, however, to get it into the system in as great amount in another way. I have been in the habit of using inunctions of potassium iodid, just as it is customary to use mercury, and with very good results.

Dr. G. C. Savage, Nashville—There is one practical point I would like to mention concerning the administration of potassium iodid. I do not know where I got the idea, but, somewhere and somehow, I learned that jaborandi, in promoting the absorption of watery effusions in acute inflammatory processes, aids the potassium iodid in effecting this absorption of plastic effusion. I give the fluid extract of jaborandi in 15 to 25 drop doses at 9, 3 and 9 o'clock, and the iodid in increasing doses after each meal.

Dr. J. A. Lippincott, Pittsburg—I have had some experience with subconjunctival injections of bichlorid and normal salt solutions, and in some cases it is a method of treatment of undoubted value. The writer of the paper mentioned that Darier used acoin to obviate the pain. My patients complained very little if the eye was thoroughly cocainized and if a small quantity of cocain was added to the solution before injecting.

I have been using massage for many years in some affections of the eye, but recently more especially in glaucoma. There is no doubt in my mind that in massage of the eye-ball we have another means of prolonging vision in glaucoma, especially in the chronic inflammatory form where there is gradual tendency for the visual field to contract and blindness to ensue ultimately. I think massage in those cases does tend to relieve the pain, keep the eye-ball soft, and in conjunction with other measures to preserve the vision.

As to large doses of potassium iodid, I have used them, but not with as much enthusiasm as our friend Dr. Baker. I have seen others, however, use it in that way with benefit.

Dr. G. A. Aschman, Wheeling—There is one disease of the many that Dr. Baker mentioned in which I have had some particularly good results with potassium iodid, that is detachment of the retina. This is a disease so difficult to treat and so many things have been tried for it that I think potassium iodid, which does so much good in removing exudates, should be tried. I have given it after the method recommended by Dr. Connor. I have under my care at present a young girl of 18, whom I think Dr. Lippincott has seen, on these increasing doses. When first seen her vision was only the counting of fingers and the detachment covered one-fourth of the inferior quadrant of the eye, but it has now diminished two-thirds and her vision is 15/70. I would like to ask Dr. Baker whether he has tried the large doses of potassium iodid for this affection.

Dr. Uribe Troncoso, Mexico—Dr. Veasey certainly stated the truth when he said that subconjunctival injections are of no great value in certain cases of interstitial keratitis, but there are some conditions in which the clearing of the cornea is marvelously assisted by this means. When I find that three or four injections do not bring success I think their use must be stopped. In regard to the pain produced by them I have not been so happy as Dr. Lippincott, for my injections have always been very painful, notwithstanding that care was taken that the needle should not penetrate Tenon's capsule, but only the conjunctiva. Darier proposed acoin, but, as I said in my paper, unfortunately I do not succeed in relieving the pain with it. Cocain can be added only to the cyanid of mercury because when added to the bichlorid it is decomposed and loses entirely its anesthetic properties. (Darier.) The action of the cocain is only temporary and a quarter or half an hour after the injection the pain begins, and lasts about two hours.

Dr. Casey A. Wood, closing discussion—I would say that so far as my knowledge goes, I believe we are indebted to Dr. Moyer, professor of therapeutics in the University of Chicago, for the explanation of the different action of potassium iodid in large and small doses. When given in small doses and without a great deal of water it forms organic combinations in the stomach that produce irritation, but when given in large doses its action is mainly that of a diuretic, especially if given with a quantity of water. It is then carried off by the kidneys, as well as by the skin and mucous membrane. If this be true it explains why in large doses we get the benefits of the drug without its deleterious effects. I heard Professor Moyer recently say that he was in the habit of giving as much water as the patient could possibly drink and the larger the quantity taken the less frequently the disagreeable symptoms of iodism are present. In my experience that is true and I frequently give 400 or 500 grains a day.

I was very much interested in what Dr. Thompson said about the "brown" ointment. I have never laid any claim to originality in this matter, but I have not as yet discovered the inventor of what I consider a valuable addition to the ophthalmic armamentarium. I never advise patients to use massage at home, for I think it is possible for them to do harm with this and other agents employed with the massage.

DR. A. R. BAKER, closing discussion—It was with a great deal of hesitation that I presented this paper, because I have been criticised by some of my medical friends at home for giving such large doses, and the sanction that has been given to the use of large doses of potassium iodid is very gratifying indeed. Such an excellent authority as Jonathan Hutchinson, I believe, says it is never necessary to give over 15 grains at a dose. I am very glad to hear Dr. Connor's favorable experience with young children. In the early part of my practice I thought I had injured some infants by the use of large doses, and though I was surprised recently in looking over my notes to see that I was giving such large doses to children with good results I felt that it was necessary to apologize for it in my paper.

In regard to Dr. Aschman's question concerning detachment of the retina, I would say that I have used it in a number of cases with doubtful benefit. In some cases where there was doubt of the diagnosis I have had improvements; it is certainly worthy of further trial in these cases.

ELECTRIC RECORDING PERIMETER.*

WILLIAM M. SWEET, M.D.

PHILADELPHIA

Of the many perimeters which have been devised for recording the field of vision, the instrument devised by Dr. Malcolm M. McHardy, of London, has met with the most favor. It is an excellent instrument, and whatever its defects, they are to be found in all similar forms of apparatus in which the test object is moved by a flexible cord. The instrument here shown was devised with a view of correcting the faults which experience shows exist in the ordinary form of perimeter. Apart from the use of small electric lamps for the fixation spot and for the test object, it differs in important details of construction from the usual form of perimeter. The arc which ordinarily carries the movable test object is replaced by a steel tube, at the end of which are cog-wheels for rotating a metal arm carrying a small electric lamp. Motion is transmitted to this arm by a shaft running through the center of the tube; the rotation of this shaft is communicated by suitable gearing to a slide carrying a steel point, as in the present form of perimeter, for making the record on the chart.

The electric lamp at the extremity of the rotating arm is designed for the test-object, two discs being provided in front of the lamp, one containing openings of various sizes, and the other holding circles of differently colored glass.

The usual form of chin-rest is employed, adjustable to various heights. The fixing point consists of a small mirror, which reflects the light from an electric lamp placed above. This permits the fixing point to be made of small size, so that the illuminated test-object may pass behind it, a matter of importance in the plotting of scotomata near the center of the field.

The record of the field is made in the usual manner by pressing the chart against a steel point. On the upright support of the perimeter is a steel pin, fitting into an opening on the arm of the chart-carrier. By this means the errors which often occur from sagging of the chart-carrier are avoided. The steel pin is adjustable to permit a heavy or light puncture on the recording chart.

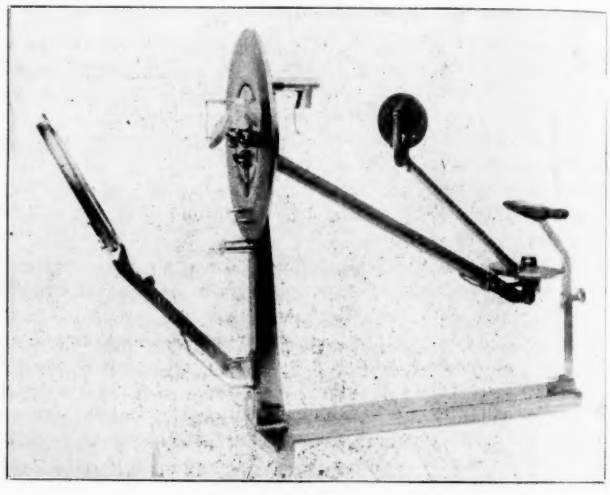
The instrument is designed for a chart about six inches in diameter, experience proving that the small form of chart tends to confuse the details of the field, especially when it is desired to record the form and color-fields on the same sheet.

Since the illuminated object passes behind the fixing point, each meridian of the field may be measured through an arc of 180 degrees without rotating the main portion of the instrument.

An important feature of the instrument is the button on the base of the stand for extinguishing the light of the test-object. When the patient first recognizes the light as it enters the range of vision, the pressure of the finger on this button puts out the light of the test-object, and determines the correctness of the patient's first answer.

The electric lamp may be operated with small storage cells, or, if desired, by the ordinary direct or alternating commercial circuits. The three-cell dry battery employed for small electric lamps gives satisfactory illumination, and may be replaced at moderate cost.

The advantage of beveled gearing, with absence of lost motion, over flexible cords for operating the test-object, will be apparent, while the substitution of a noiseless moving light, of constant intensity of illumination, for the present traveler, carrying colored discs, whose brightness varies with the character of the daylight, insures visual fields which are uniform for purposes of comparison.



Electric Recording Perimeter.

The perimeter is made by Queen & Co., of Philadelphia, who have admirably worked out the mechanical details necessary to assure an accurate instrument.

1205 Spruce Street.

DISCUSSION.

DR. H. F. HANSELL, Philadelphia—The advantages that this perimeter has over those in use are its noiselessness, and facility for the accurate measurement of the limits of the field by eliminating the possibility of deception and imperfect observation on the part of the patient. Its single disadvantage is its expense.

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

Water Treatment of Catarrh of the Upper Air Passages.—According to Linkenheld's description of his hydriatic treatment of catarrh, published in the *Deu. Med. Ztg.* 45, the temperature and force of the stream are the chief factors in the cure and not the chemical composition of the fluid used. He irrigates the upper air passages with plain water at 28 C. in acute catarrh. In the hypertrophic variety he rinses alternately with water at 27 and 32 C. In atrophic catarrh he uses large amounts, .5 to 2 liters of water under considerable pressure, alternating 27 and 32 C. with 18 C.

GLIOMA OF THE RETINA.*

G. A. SULZER, M.D.
PORTSMOUTH, OHIO.

As glioma of the retina is not commonly met with, particularly in private practice, I venture to report the following case. More than a year ago, through the courtesy of Dr. P. J. Kline, of Portsmouth, Ohio, a 14-months-old girl was brought to me for treatment of the right eye. The parents stated that the eye did not seem natural in appearance at birth, though marked signs of disease did not present themselves until the fourth month, when a whitish reflex was visible through the pupil, and later the eye increased in size, became inflamed and painful. On examination, it was found to be considerably larger than its fellow, and the ocular and palpebral conjunctivæ were congested; a well-marked pericorneal zone was evident. The cornea was clear and measured 12 mm. in the vertical meridian, and 13 mm. in the horizontal. The pupil was 5 mm. in diameter, and fixed. The anterior chamber was very shallow and the iris a dark green, in decided contrast to the bright blue of the iris of the left eye. A whitish reflex could be seen through the pupil. The tension was very high, the eye almost stony hard and tender to the touch. With the ophthalmoscope a large, whitish mass was seen almost filling the vitreous chamber, the fundus reflex being invisible. The left eye was normal in appearance and vision good. Glioma retinæ was diagnosticated; enucleation was advised and adopted. The operation and convalescence were without incident. The ball was hardened in 1 to 8 formaldehyde solution, and at the end of a week was removed. An incision at the equator gave escape to a greenish viscid fluid; the anterior and posterior chambers emptying through an incision into the cornea, caused the iris to return to its natural blue color. The large, whitish tumor mass almost filled the vitreous cavity, apparently growing from the optic papilla, pressing forward the lens and iris and was slightly attached to the lens capsule. Section of tumor showed small spots of fatty degeneration and calcareous infiltration. The retrobulbar portion of the optic nerve appeared to be normal. The choroid and retina seemed disorganized, and the lens was peculiar in having a yellowish opaque nucleus about 3 mm. in diameter. The cortex was clear, but yellow.

Dr. David Riesman, of Philadelphia, to whom the specimen was sent for a pathologic report, stated that, because of fatty degeneration of the tumor mass, it was difficult to interpret it, finally concluding that it was a glioma. Further he says: "The glia cells are large, chiefly round, but occasionally slightly oval with deeply stained nuclei, which apparently have no protoplasmic ring. The cells are without processes. The tumor seems to have lifted the retina and lies between it and the choroid, separated in places from the latter by cells having spindle-shaped and oval nuclei and considerable intercellular substance, and placed angularly toward the choroid. Where the tumor nodules are very compact, the cells are distorted by mutual pressure and here and there among them are found large peculiar bodies, probably degenerated cells, which stain a pale blue. Much detached pigment lies near the choroid coat. The vitreous chamber is largely occupied by the new growth, the cells of which occur in small, scattered groups and vary considerably in size. An extensive hemorrhage has filled the tumor with red blood-corpuscles, which are fairly preserved, and scattered among them are peculiar dumb-bell-shaped bodies of a brownish-black color, somewhat resembling diplococci, but representing probably some form of blood crystal. The retina is detached in places and thrown in folds."

Schobl,[1] in his excellent chapter on glioma, in the "System" of Norris and Oliver, defines glioma as a malignant intraocular growth. "Histologically a more or less circumscribed hyperplasia of the retinal neuroglia, most frequently arising from the inner granular layer, though it may spring from any of the layers having supporting fibers, except the layer of rods and cones." There are two forms, circumscribed and diffused, and according to the direction of growth, glioma endophytum, that form growing into the vitreous, and glioma exophytum, growing backward into the subretinal space. The etiology of glioma is as obscure as that of tumors generally. Fuchs[4] refers to a "congenital morbid disposition." Schobl[2] mentions the same feature and says: "No predisposition or other etiological factors are known, although a connection between trauma and glioma has often been maintained but never proved." As regards pathology, Schobl,[3] in quoting Greef, says: "From these investigations it would appear that gliomata practically consist of hyperplastic glia cells, the offshoots of which form a dense network of fibers, ganglion cells and nerve-fibers." For this he proposes the name of "neuroglioma ganglionare."

Fuchs[5] quotes Virchow, thus: "Glioma develops ordinarily from the two granular layers of the retina, principally from the inner granular layer, and is composed of small cells and a very soft basement substance. The cells consist of a nucleus surrounded by a very scanty amount of protoplasm, which in many spots possesses minute processes. According to the varying character of these processes, the cells are classed partly as glia cells, partly as ganglion cells. Usually the tumor cells are aggregated in peculiar dense masses along wide blood-vessels, which thus get to have cloak-like envelopes, and the entire tumor consequently exhibits a tubular structure. In many cases there are also found long, cylindrical cells, which are undoubtedly to be regarded as constituent parts of the external layer of the retina or the neuro-epithelium of Schwalbe. (Flexner, Wintersteiner.) These are arranged in groups, usually in such a way as to enclose a free cavity into which their extremities, representing outer members of the rods and cones, project. Hence, if we take these structures into account, it would seem more correct to give glioma the name of neuro-epithelioma of the retina."

Histologic sections of the tumor have been made, and I take pleasure in presenting them for your inspection. In this case two points are of especial interest: 1, there has been no return of the disease, though fourteen months have passed since the enucleation; 2, the family history is negative, the patient being the third of a family of three girls. Discussion of the case and on glioma retinæ is solicited with the hope of refreshing our knowledge of the subject.

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1. Norris and Oliver, vol. iii, p. 552.
2. Ibid., p. 557.
3. Ibid., p. 573.
4. Textbook of Oph., p. 466.
5. Ibid., p. 465.

* Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

DISCUSSION.

DR. G. E. DE SCHWEINITZ, Philadelphia—Dr. Sulzer's complete presentation of his case leaves little room for discussion, and I will therefore content myself with the exhibition of a drawing illustrating the structure of that type of glioma which receives the name neuro-epithelioma—a name which Wintersteiner believes should always be used in place of glioma. You observe the tubular structure and how the cells send processes through the walls of the tubules into their lumina. The elements here involved are analogous to the cone-nucleus, the membrana limitans externa, and the cone-body of the normal retina. The first paper calling attention to this conception of the ultimate structure of gliomas was written by Dr. Simon Flexner, now of the University of Pennsylvania.

DR. J. L. THOMPSON, Indianapolis—I simply want to speak of the results of these cases. A great many have stated that true glioma of the retina is always fatal. If you recall it, I reported some 17 cases three years ago and 4 out of those 17 are still livng. In all of these cases the tumor was examined by Dr. Knapp, or Dr. Weeks or Dr. Wynn, all expert microscopists.

DR. J. M. BALL, St. Louis—I am under the impression that some cases have been reported as glioma of the retina where a careful microscopical examination would have shown the pseudo-glioma. I might report a case which a number of ophthalmologists considered to be true glioma, but which on examination proved to be a pseudo-glioma. A period of three years has now elapsed since the operation, but if that specimen had been badly treated or mislaid, or no microscopic examination made, it would have been considered a true glioma, the operation for which had been followed by no recurrence.

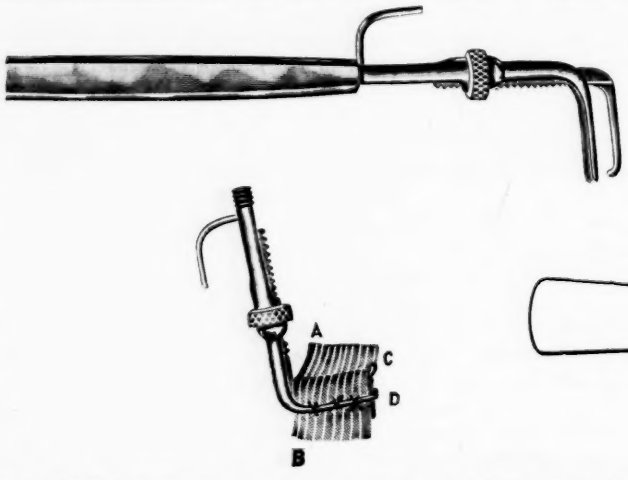
DR. SULZER—I have only to add that both Dr. Shumway and Dr. Flexner saw this specimen and agreed on the diagnosis.

A DOUBLE HOOK FOR USE IN ADVANCEMENT OPERATIONS.*

C. F. CLARK, M.D.
COLUMBUS, OHIO.

This instrument is intended to simplify the operation for advancement of the recti muscles and to make it possible to regulate with certainty the amount of shortening obtained. It consists of a small hook, the shank of which is embedded in the anterior surface of a larger one, and the arm of which passes between the blades of the forked arm of the larger one. By means of a milled screw and a ratchet the single hook may be projected beyond and between the blades of the double one, so as to take up a fold of the tendon and draw it up between the blades to the desired height, when the sutures may be introduced and the superfluous fold cut off, if so desired. The instrument is made with a detachable handle, so that during the suturing the aid of an assistant may be dispensed with. I have found it operate most satisfactorily when the capsule of Tenon is included with the tendon of the muscle, as this gives greater holding power to the sutures.

I think the accompanying illustrations will make clear the character of the instrument.



A and B is a strip of tape drawn up into a fold by the hook at C D, showing the points for the insertion of sutures at XXX.

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

AIDS IN THE MEASUREMENT OF REFRACTION.*

EDWARD JACKSON, A.M., M.D.
DENVER, COL.

The two instruments that I herewith present have proved of sufficient value, in facilitating the testing of the refraction of the eye, to justify me in calling the attention of the members of the Section to them. The first is

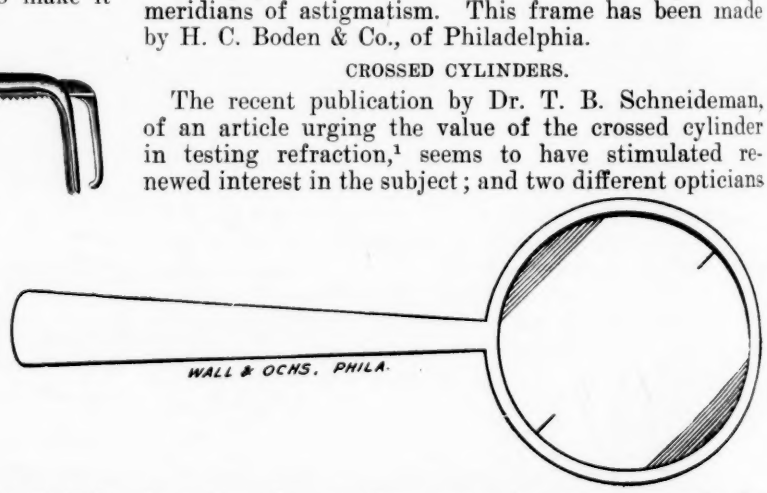
A TRIAL-FRAME FOR SKIASCOPY.

It is simply a light trial-frame, in each cell of which is fixed a metal disc, with a central opening large enough to allow the application of the shadow-test through it.

Upon the disc are enameled bands of black and white, each occupying an angle of 30 degrees of the disc. In the center of each band is marked a point, white in the black bands, and black in the white bands. This constitutes a graduation to 15 degrees spaces. The center of a white band marks 90 degrees, and the center of a black band, 180 degrees, of the usual graduation of the trial-frame. This arrangement affords a kind of graduation that can readily be seen with the light thrown on the eye while applying the test. It furnishes something with which one can easily compare the band of light in the pupil that indicates the directions of principal meridians of astigmatism. This frame has been made by H. C. Boden & Co., of Philadelphia.

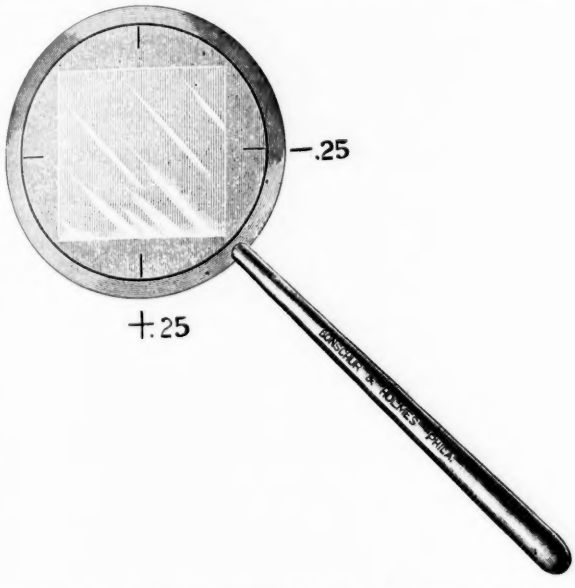
CROSSED CYLINDERS.

The recent publication by Dr. T. B. Schneideman, of an article urging the value of the crossed cylinder in testing refraction,[1] seems to have stimulated renewed interest in the subject; and two different opticians have brought me these convenient arrangements for the use of the test. Each has the axis of the convex cylinder indicated in the usual way for showing the cylinder axis. The lens is mounted in a frame having a handle set at 45 degrees from the cylinder axis. Holding the lens before the eye, with this handle between the thumb and fingers, one can, by a very slight movement of rotation, instantly change the direction of the cylinder axis 90 degrees, thus reversing the cylindrical effect. The lens is used as a supplementary



*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

lens, held in front of the lenses already chosen, which are placed in the trial frame. By this reversal of the axis we alternately increase and diminish the cylindrical effect of the combination before the eye. The lens with the round handle is made by Messrs. Bonschur & Holmes, and the lens with the flat handle is made by Messrs. Wall & Ochs, all of Philadelphia. The one with the round handle (see illustration) is the more easily turned; while the one with the flat handle can be more



readily kept exactly perpendicular to the visual axis. Either will be found of great practical value in refraction work.

DISCUSSION.

DR. W. F. SOUTHARD, San Francisco—Five years ago I devised a method of transillumination for the ophthalmometer, which I believe was the first effort in this direction. I first used ground glass, and gave that up because there was not a good distribution of light, and then I began to use porcelain [exhibiting the instrument]; a 16-candle power, 110-volt lamp is used. I did not think that it was obligatory to have it patented, but that any instrument-maker could be privileged to make it without danger of prosecution and such difficulties as I have experienced. I have testimonials from several manufacturers to show that this instrument was the first of the kind that they saw. One of the gentlemen spoke yesterday of the blurred edges of the mires as they approach each other. That is true and always will be, because it is due to an optical defect. I pay no attention to that myself, knowing that it is an optical illusion, and when at the point of contact there will be a little whitening more than we see here. I have demonstrated this instrument before a number of medical societies, and I desire the privilege of having my claim of priority published now in the transactions.

DR. A. EDWARD DAVIS, New York City—I may say that there was a transilluminated mire in use several years ago. Javal himself had one, but it was not so perfect an illumination as this.

DR. MILES STANDISH, Boston—I want to illustrate a little scheme I have adopted on my ophthalmometer, which aids me greatly in judging the point of contact. I have painted in the center of the solid white portion of the first step a little spot 1 mm. square, so that when the mires approach you have a point still beyond the light diffusion, and by watching this point you can judge the point of contact very accurately. It can be very easily accomplished by pasting a little black square on the mire, and once having placed it there you will never take it off again.

1. Ophthalmic Record, April, 1900.

SYMPTOMS AND DIAGNOSIS OF HYPERTROPHY OF THE PHARYNGEAL TONSIL.*

GEORGE MORGENTHAU, M. D.
CHICAGO.

Symptoms.—Hypertrophy of the pharyngeal tonsil is, in many cases, combined with enlargement of one or more other parts of Waldeyer's so-called lymphatic ring of the pharynx, and of the adenoid or lymphatic tissue found in all the mucous membranes. The symptoms produced by these abnormal conditions, while mainly traceable to the pharyngeal tonsil, may not be ascribed to it entirely, but must be considered in reference to a possible constitutional anomaly of which the adenoid vegetations are but a local manifestation. The most common of these is the excessive discharge which flows either into the nasopharynx or into the nose. It is of thick consistency, sometimes with a slight odor, and comes from Luschka's tonsil itself or from the nose. The tonsillar secretion in conjunction with the venous stasis, especially of the posterior ends of the lower turbinals, and the mechanical interference with drainage of the nasal chambers, by the enlarged tonsil, result in chronic rhinitis. This, in turn, is favored by various malformations found so often in patients with adenoid growths, be the relation causal or accidental. The growths being situated behind the choanæ, inspiration may be performed, while in expiration the growths fall against the nose, acting as valves. "Blowing the nose," is, therefore, quite inefficient. They are but seldom large enough to obstruct more than the upper part of the choanæ, so that the children can, although with some effort, breathe through the remaining lower part of the canal. But when this, too—as is most apt to be the case when the children are in a horizontal position—is either obstructed by the accumulating mucus or by the swelling of the posterior ends of the turbinals or even by the action of the erectile tissue in the tonsil. then they are forced to breathe through the mouth. Infants are sometimes unable to nurse at the breast. Bosworth states that acute rhinitis is comparatively rarely met with in a child. In most cases, when it has an apparent cold in the head, it is really suffering from a subacute inflammation of the pharyngeal tonsil. The nose is rendered still more inadequate for breathing by a condition to which Ingals drew attention, abnormal narrowness of the choanæ—a factor which accounts for some disappointing results after the growths have been removed as thoroughly as possible. Nosebleed sets in often, from small capillaries in the anterior lower angle of the septum or in the tonsil. If the blood can not escape, small petechiæ are to be seen in the submucous tissue, especially of the soft palate and the uvula, or in the tonsil itself. The discharge from the nose is apt to excite eczema at the introitus, thickening and roughness of the upper lip, etc., symptoms often attributed to scrofulosis. The chronic inflamatory condition of the nose is, in many cases, followed by impairment of smell and taste; frequently by conjunctivitis, occasionally by blepharitis, and even by keratitis. Or, as discharge gathers in the nasopharynx during the night, it may trickle into the stomach or be unconsciously swallowed, causing vomiting and gastric mischief, thus adding to the malnutrition of our little patients. The laryngeal and bronchial

*Read in a Symposium on Hypertrophy of the Pharyngeal Tonsil, before the Chicago Climatological and Laryngological Association, July 5, 1900.

symptoms, again, are either brought on by the descending mucus or by mouth-breathing. The most common symptoms are cough, hoarseness and false croup, and bronchitis and bronchopneumonia. While Bosworth states that, in laryngismus stridulus, there is acute swelling of the lymphoid tissue in the larynx proper, it does not seem unlikely that the mechanical irritation of the mucus might excite such attacks. Adenoid growths are often accompanied by nervous disorders. Caution is therefore necessary in drawing deductions from a comparison of the state of the patient before and after operation. The psychical effects of the operation itself might prove corrective of some of the nervous disturbances, or the greatly improved general condition of the patient after operation might be responsible for the beneficial change. In a word, the association of nervous predisposition and of lymphatic growths might be accidental, as the latter are of such common occurrence, especially in children. However, cures of asthma, chorea, even of epilepsy have been reported. Stammering and stuttering, not uncommonly met with in such cases, have been greatly benefited by the operation. Major ascribes enuresis nocturna to carbonic-acid gas poisoning from insufficient ventilation of the blood, the breathing being too superficial because of the stenosis. Of this, interrupted sleep and snoring are a further result. The best explanation is advanced by Fraenkel, that the base of the tongue falls backward on the epiglottis, thereby obstructing the larynx. The deformities of the chest are, according to some authors, caused by the necessity of breathing through the mouth, the respiration being superficial, with limited expansion of the chest. Fraenkel finds that in the chest, as in all stenoses of the upper air tract, the upper parts are emphysematous, the lower atelectatic. Trautmann and others speak of a paralytic form, predisposing the patient to tuberculosis. Talbot, however, considers the deformities of the chest—and of the face—not the result of adenoid growths, but, with them, signs of a general degeneration of the body combined with degeneracy of the mind. The children appear stunted in their physical growth, but it is common enough to see them increase in size and weight very soon after the operation. The peculiar facial appearance is produced by the broadening and flattening of the bridge and root of the nose, the narrowness of that organ, while the nasolabial folds are not well defined, the mouth is open, the eyes seem veiled. The dull expression is enhanced by the impairment of hearing so often present.

In marked cases, the jaw seems compressed from side to side; the hard palate is not flat but forms a high arch; the alveolar border is not rounded but comes to a point in front, is V-shaped; the teeth override each other; the upper incisors protrude from the mouth and beyond the lower incisors, which are usually normal; the teeth are more liable to diseases. Koerner distinguishes two forms according to the presence of adenoid growths before or after second dentition. In the first case, the palate is higher; in the second, the V-shape is characteristic, occurring only when there is nasal obstruction by adenoid growths. While the patient may appear to be stupid, he is not necessarily so. It is certain that such patients are often enough the brightest of children. They do, however, often complain of headaches and inability to concentrate the mind. Guye has termed the latter aprosexia. Whatever theory may be based on the anatomical connection between the nasopharynx and the brain, the symptoms are greatly alleviated by the removal of the pharyngeal tonsil.

Scanes describes a distinct transverse vein across the root of the nose. Schmidt relates that, in two children with continued elevation of temperature, the removal of adenoid growths did away with the fever. The importance of such an observation must be acknowledged in its bearing on a doubtful case of tuberculosis, etc. Most characteristic is the "adenoid" speech. The whole nasal cavity being excluded as a resonator, the voice sounds dead, different from that state when the nose is closed in front, or when enunciation becomes indistinct from enlargement of the faucial tonsil. Certain consonants are mispronounced; m becomes b, and n becomes d, etc. Lately, it has been shown by actual count that the blood of children with adenoid growths is impoverished and that, soon after their removal, it quickly approaches the standard averaged from examinations in normal children.

Thost asserts that symmetrical swelling of the numerous small glands of the superficial cervical plexus, in the lower triangle of the neck, behind the sternocleidomastoid, is characteristic of Luschka's tonsil.

Last, but not least, in this brief summary, are to be mentioned the effects of hypertrophy of the pharyngeal tonsil on the organ of hearing. While not as obvious and manifest as, for instance, the evils of mouth-breathing, there is hardly any condition which calls more imperatively for removal of the offending growths than the various affections of the ear whose cure is otherwise often impossible. Adenoid growths are the most prolific cause of certain diseases of the ear in childhood, excepting, perhaps, the infectious diseases. And these themselves seem to be less of a menace to that organ when the children are relieved of the growths. Simple, so-called, catarrhal otitis media, tubal stenosis, purulent otitis media, with its many sequelæ and complications, eczema of the external canal, etc., often owe their origin to inflammations which either start from the hypertrophied tonsil or are due to conditions dependent on its presence. Otology dates one of its greatest advances from the recognition of the supreme influence of nasopharyngeal and nasal diseases and abnormalities on the anatomically and physiologically intimately related hearing apparatus.

Diagnosis.—The combination of the characteristic facial appearance, of the manifold signs of nasal stenosis, of the voice—which, to be sure, is very similar in paralysis of the soft palate—combined with the aural symptoms, make the diagnosis possible almost at a glance. Sometimes the growths are abundant enough to hang below the soft palate and to become visible as soon as the tongue is depressed. The posterior wall of the pharynx may be studded with lymphoid follicles enlarged from the irritation of the secretion flowing from above. If the children be not too nervous or unwilling, they can be examined by posterior rhinoscopy. The growths can be divided into, practically, two varieties: Either there appears in the mirror a whitish, firm, semispherical cushion, resembling an enlarged faucial tonsil, lying between the openings of the Eustachian tubes, encroaching on the upper part of the septum; or real vegetations are seen, resembling stalactites, berries, etc., and filling the whole or parts of the nasopharynx, spreading from the choanæ into the tubes and far over the vault, the posterior wall of the pharynx, and sometimes the pharyngeal wall of the soft palate.

With anterior rhinoscopy, the growths may be distinguished as they are lifted by the soft palate in phonation, the light reflexes moving with them. They can also be felt with a probe introduced through the nose.

Oil sprayed with an atomizer into one nostril returns with almost undiminished volume through the other if it does not meet with an obstruction. Bosworth advises this method for confirming the diagnosis of adenoid growths. Palpation with the index finger introduced gently behind the soft palate is a quick and valuable way to examine the nasopharynx, even if it is not pleasant nor elegant.

The question when lymphatic glands are pathologically enlarged is usually answered without hesitation. As even the most superficial ones can not be felt through the skin when they are in normal condition, it seems reasonable to pronounce tonsillar tissue pathological when it is plainly visible on macroscopic examination.

The differential diagnosis should be quite clear in the vast majority of cases; as retropharyngeal neoplasms and nasal growths extending into the nasopharynx are exceedingly rare in patients between the ages of 5 and 15, when adenoid growths are most prevalent and troublesome. Palpation would, generally, when the patient is well anesthetized, enable one to decide between uncomplicated adenoid vegetations, on the one hand, and nasopharyngeal sarcoma, or fibrosarcoma, or unusual prominence of one of the retropharyngeal lymphatic glands, on the other. An appeal to the microscope might, however, be necessary if the tonsil should be invaded by malignant or tuberculous disease.

IODIN USED HYPODERMICALLY IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

ALFRED CARENO CROFTAN, A.M., M.D.

Formerly Assistant Professor of General Diagnosis and Clinical Instructor of Diseases of the Chest, College of Physicians and Surgeons, Chicago.

PASADENA, CAL.

The action of iodin on the healthy body has been exhaustively studied; ideal conditions, we may say, were naturally created for such investigation. It seems that the water, soil and air, and consequently the flora of Geneva, Switzerland, are singularly free from iodin; the inhabitants of that region, therefore, constitute a virgin soil for the drug and display a remarkable susceptibility to its action.

Coindet, of Geneva, first described the physiologic effects of the drug; he was led to his studies on iodin while investigating the curative effects of sponge-preparations on goiter—bronchocele—which occurs with such frequency in Geneva; he suspected that iodin was the active remedial principle in the sponge and the other marine products that had for generations been successfully employed for the cure of this affliction. Rilliet, also of Geneva, continued these investigations and in a remarkable "Memoir" presented to the French Academy of Medicine, in 1860, first described iodism and introduced the drug into practice. Trousseau reports on this "Memoir" in the 25th Bulletin of the French Academy. From the reports of these two investigators, that have since been repeatedly corroborated and amplified by reliable authorities—Binz, Niemeyer, Kaemmerer, Sée, Stillé—we glean the following information in regard to the pathogenesy of iodin.

Iodin is peculiarly a drug against which different subjects show marked idiosyncrasies; some people can take large doses with impunity, others are speedily and violently affected by almost incredibly small doses. Thus Trousseau reports that the Geneva goiters are cured with doses of iodid of potash of less than a milligram, the sponge preparations necessarily contain most minute quantities; in certain sensitive subjects, Rilliet reports "grave accidents" from using quantities of table-salt that contained one part of iodin to 10,000 parts of the salt. He even saw iodism develop in these people from a sojourn at the seashore where, it is estimated, they inhaled from a fiftieth to a tenth of a milligram a day. Cod-liver oil contains about one part of iodin to 40,000 parts of oil, and it is not impossible that the curative effects that this marine product exercises on certain "strumous" diseases and the benefits that are claimed for it in tuberculosis may be attributed to the presence of even so minute a quantity of iodin.

The chief symptoms observed are emaciation, usually accompanied by profuse sweats, some pyrexia and an accelerated pulse; a peculiar psychical depression develops a form of hypochondriasis, "anxietas."

A large field of action is the mucous lining of the respiratory tract; when the system becomes saturated with iodin, almost any of the manifestations of inflammation of these tissues may supervene, coryza, angina, laryngitis "with hoarseness, aphonia and chronic inflammation, even simulating laryngeal phthisis;" the lungs show "congestive oppression, and hemoptysis may occur;" Zeiss[1] reports an "abundant serosity" in the lungs of dogs that had been subjected to subcutaneous injections of iodin and an iodid in solution. The serous membranes, too, become affected and pleuritis has been observed. These effects on the respiratory passages, it must clearly be understood, are remote effects of the drug and follow the administration of iodin wherever in the body it may have been introduced; they must not be confounded with its local irritative action following inhalation or topical application.

The lacteals and the lymphatic system are probably the main sphere of action; iodin acts as an irritant, and possibly this explains the emaciation, inasmuch as the chyle is absorbed more slowly, is insufficiently elaborated by the mesenteric glands, and the absorption of fats is, as a consequence, reduced. Hence, probably, too, the profound remedial action of iodin on bronchocele, lymphatitis—scrofulosis, strumous diathesis—and tabes mesenterica, in all of which afflictions the lymphatic and lacteal systems are inclined to hyperplasia, with resulting sluggish function, etc.

If we study the symptomatology of incipient tuberculosis we find that essentially the same tissues are stimulated to a reactive display of energy by the tubercle virus as by iodin. Again, we must carefully exclude the local, mechanical, and destructive action of the living parasite, and try to draw into the circle of our considerations only the remote effects that are exercised by the products of microbian life near the focus of infection and in distant parts of the body.

Locally, we have that "liquefaction of tissue" that is so commonly attributed to the action of iodin; remotely, the specific selective affinity for the respiratory mucosa, the serous membranes, the lympho-lacteal system; we have the emaciation accompanied by pyrexia, tachycardia and sweats; probably the initial psychosis so often observed is the same.

In the light of our theoretic beliefs the administration of iodin should act curatively in pulmonary tuberculosis; the virus of tuberculosis, entering the blood at first in minute quantities, produces certain slight reactive phenomena from the

1. La Clinique, Feb., 1900.

cells that it is selectively attracted to; this reaction may or may not become subjectively and objectively perceptible; that will depend on its intensity, the character of the reactive symptoms and our facilities for recognizing these symptoms with the rather crude clinical means at our disposal and the uncertain evidence of our senses. If the stimulation and the resulting reaction are strong enough, then the vis medicatrix can protect the organism unaided; if it is not sufficiently powerful then the organism is in danger, and it is here that a substance that is capable of irritating the same cells that are reacting to the tubercle virus can produce an increased reaction and aid nature.

Finally, if a carefully graded and sufficiently small dose of iodin will exercise a curative effect in tuberculosis, then a large dose should aggravate by overstimulating and consequently exhausting the very cells that are by their reaction counteracting the toxin invasion. Clinical experience bears this out. Knopf speaks of the "congestive and softening" action of the drug in incipient and latent tuberculosis, and condemns the practice of administering iodids for diagnostic purposes in such cases; it increases bronchial secretion and generally accentuates the physical signs. Hughes speaks of "the occasional development of phthisis pulmonalis in iodized patients in whom apparently no previous tendency thereto had existed."

Accurate dosage is essential to the success of the plan of treatment that is being advocated; too large doses of iodin will certainly aggravate, too small doses will be inefficient. A variety of plans were tried to secure accurate dosage of iodin. At first, the administration of iodid of potash by mouth was considered; it was expected that, according to the researches of Binz, the alkaline iodid, when it reached the tissues, would in the presence of protoplasm and CO_2 be decomposed and free iodin be liberated; this actually occurs, but only a small portion of the iodid of potassium is dissociated in this way and a large proportion is voided in the urine and wasted. On the other hand, Sée calls attention to the fact that iodin, when given by mouth, necessarily unites with the sodium in the stomach contents and is consequently absorbed as alkaline iodid; this entering the tissues is again partly decomposed and partly wasted; accurate dosage of iodin by mouth, either as iodin or in the form of its alkaline salts, is, therefore, impossible.

Administration by inunction in an oily menstruum was considered; europhen and the other non-irritating iodin compounds recently brought before the profession lend themselves very readily to such use, but accurate or even approximately accurate dosage is, of course, impractical. Hypodermic administration of iodin seemed the only reliable plan, and here the irritative properties of the drug seemed to prohibit its use; at this juncture our attention was called to a paper by Klingmueller,[2] in which he reports the results of his investigations with an iodin preparation called iodipin, which is an iodin addition product of sesame oil, a yellow fluid of oleaginous taste, 10 per cent. iodin. Klingmueller reports as follows: "It was first found by experiments on animals that the drug employed hypodermically was not toxic; thirty-six patients were treated and received 220 injections of a 10 per cent. preparation. No unpleasant effects were observed even when 20 c.c., the equivalent of 30 grains of iodin, were injected daily. . . . Subsequently additional injections of a 25 per cent. preparation were made with equally satisfactory results. Not only was the iodin deposited in the subcutaneous tissues slowly absorbed and distributed, but all of it was necessarily taken up and rendered active. Iodin appeared in the urine in from three to five days after the treatment was begun and its excretion continued for several weeks, while in the other preparations the iodin appears earlier and the period of elimination is much shorter. . . . The subcutaneous method of injection of iodipin has the further advantage of being painless, convenient and cheap. . . . The specific action of iodin was manifested after subcutaneous injections of iodin in the same degree as when other iodin preparations, and especially iodipin, were injected by mouth."

Before attempting the hypodermic administration of iodipin in human subjects, the advisability of preliminary animal experiments was considered; however, it is well-nigh impossible to experimentally simulate tubercular invasion as it actually occurs; instead of gradually gaining a foothold in some weakened spot of a bronchus or bronchiolus, the bacillus in laboratory tuberculosis is injected in enormous quantities directly into vulnerable tissues; its virulence is great; the animal's natural means of defense are speedily overcome and it succumbs in every instance. Furthermore, we know that iodipin injected into a non-tubercular subject can do no harm and that, if the dose be carefully regulated, only beneficial effects can be expected in a tubercular case. Animal experiments were, therefore, waived as unnecessary and the administration of iodipin tried directly on patients in whom the diagnosis of tuberculosis of the lungs had been positively made.

Iodipin was employed in the form of the 10 per cent. preparation. The injections were made into the subcutaneous tissues between the skin and the muscle, and preferably in the gluteal and interscapular regions. No discomfort of any kind was ever caused, no inflammatory reaction observed at the site of the injections, though some patients received daily injections for a period of three or four months.

Beginning with one drop of iodipin, which, to give the necessary bulk for hypodermic administration, was dissolved in half a dram or so of sterilized oil, the injections were gradually increased, one drop being added to the dose each day. The dosage was regulated by the symptoms; as soon as an improvement became apparent, the dose exhibited at the time was continued for a period of thirty to sixty days. Much will depend on the individual idiosyncrasies of the patient and the stage of the disease. In some cases the quantity that acted beneficially for a time seemed to grow insufficient and the dose was again increased drop by drop; more than 60 minims a day have so far never been given. Bad effects from this mode of administration were never observed. As 100 drops of the 10 per cent. iodipin weigh 2.5 gr., and consequently represent 0.25 gr. of iodin, each drop of iodipin administered represents only 0.0025 gr. of iodin, or about 0.04 grains.

The object of giving the drug in gradually increasing doses is apparent from our theoretic postulates; it is twofold: 1, to avoid the exhibition of too large a dose, the aggravating effects of which are recognized; 2, in order to create a full artificial immunity against the drug; by employing this plan much larger doses can be administered finally with impunity and more decided reactive effects produced in the end.

The results obtained so far by this plan of treatment have been uniformly good; in a few cases amelioration of symptoms was marked from the beginning; appe-

2 Berlin klin. Woch., June 19, 1899.

tite improved, the cough, the night sweats grew less severe, the patients gained in weight and improved in spirits. The physical signs were modified and seemed to show that the process was at least being held in check and rendered latent; in 2 out of my 27 cases a recurrence of symptoms occurred at the expiration of three and five months, respectively; these patients underwent a second course of treatment with good result. It is altogether too early to make any statements in regard to a cure.

Iodipin injections were tried only on carefully selected cases. Where great destruction of lung tissue had occurred, when the patients were devitalized by long-lasting mixed infection, in other words, in the so-called tertiary stage of the disease, the treatment was not instituted.

Twenty-seven cases have so far been treated with good results; 19 were cases of incipient tuberculosis with only circumscribed areas of infection in one or the other of both apices; in the other 8, larger areas in one or both lungs were involved; in 7 of the 27 cases, streptococcus infection co-existed; the remaining 20 were simple infections. Detailed reports of my cases are reserved for future publication, when more clinical material shall have been adduced and the evidence in support of our theories and our practice shall have grown more numerous and more positive.

The results obtained so far are not conclusive; they are only suggestive, and final judgment on the efficacy of this method of treatment must be suspended. The results, it is true, appear to be sufficiently striking to warrant an optimistic view. The number of cases treated, however, is small and the subjects were carefully selected; in addition to the iodipin injections the patients enjoyed the benefits of all the hygienic and dietetic measures suitable to each case and the numerous advantages incident to outdoor life in the warm and equable climate of Southern California.

Notwithstanding all this, it seems more than coincidence that of the 27 cases on record all improved under iodipin injections; if nothing else, these findings should encourage to further investigation and the collation of further clinical evidence.

In conclusion, we make an earnest plea for the early recognition of pulmonary tuberculosis; the sooner the disease is recognized and treatment begun, the better the prognosis. Our clinical experience in the past leads us to join the ranks of those who consider pulmonary tuberculosis, in its incipiency and before it has become a mixed infection, one of the most easily curable of bacterial diseases.

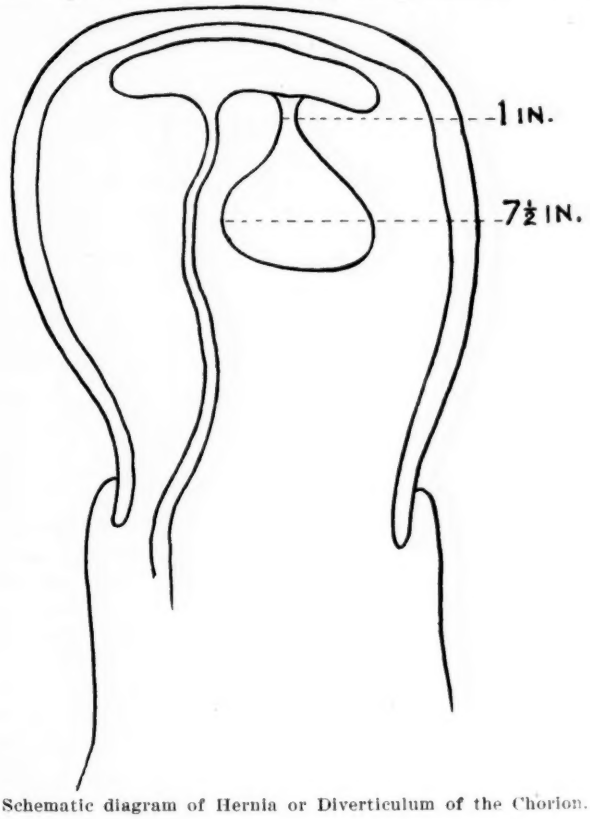
HERNIA OR DIVERTICULUM OF THE CHORION.

L. H. LAIDLEY, M.D.
ST. LOUIS.

Cysts of the placenta have been reported by Millet and others, supposed to have developed from the exudation of blood forming a clot separating the chorion, usually of small size, and in some cases more than one is noted. Ercolani reported two cases; in one the entire fetal surface of the placenta was sown with round tumors covered by chorion—the largest being about the size of a cherry. Some have been opened and the chorionic wall torn, showing a solid material filling the depth of the cyst; others were more solid, and were filled with coagulated fibrin, in which rounded masses of granular hematin could be seen.

Ercolani proved that the interior wall was formed by the chorion, which covered the whole bloody mass, of which half projected above the placental surface, while half dipped into the placental tissue, and lay in immediate contact with the effused blood. The term cyst is therefore inexact. At the placental depth of the tumors, the villosities, more fibrinous than usual, formed a compact layer, certain spots in which turned out to be cells of the serotina. Small irregular calcareous concretions were scattered through the mass.

Bustamente describes a kind of cyst which is sometimes found on the fetal surface of the placenta, of a regularly rounded or elongated shape and varying in size from 2/5 of an inch to 2 or 2 2/5 inches. They are placed below the chorion and amnion, which form their superficial fetal boundary, being limited below by



Schematic diagram of Hernia or Diverticulum of the Chorion.

the placental tissue itself. The contents of these cysts were solid and liquid.

A. Daugan reports a case of an oval tumor 4 2/5 inches long by 3 1/5 inches broad and covered by the membranes, which are partly detached from its surface. Several large venous and arterial branches of the umbilical vessels run over its surface and penetrate its substance to the center. Divided longitudinally, the tumor appears to be composed of intimately adherent lobes, some being of a dead-white and others of a pale- or deep-rose tint. Its tissue is homogeneous.

The case which I present has the following history: Mrs. I., age 32, was confined at the seventh month, being her second pregnancy, on August 5. She was in labor about six hours. All that time the os was fully dilated, without any pain, until a few minutes before her delivery, which was normal; twenty minutes afterward a tumor-like body 7 inches in diameter was expelled, proving to be a sac containing an amniotic fluid, with coagulated blood. It was attached to the placental covering, 1 inch to the left of the funis, making a pedicle ½ inch in diameter, made up of chorionic

blood-vessels and connective tissue. The placenta was detached forcibly, in order to preserve the sac and its contents. A microscopic examination of the cyst-wall shows it to contain the same anatomical structures as the chorion, fed by the same blood-vessels, producing a diverticulum, or hernia of the chorion; the fetal side presenting the chorion, the inside the amnion.

The literature does not present a similar instance of this form of tumor. As to the cause of its development, I offer the following theory: Early in the pregnancy there was, because of a relaxed state of the wall of the chorion, a portion of it so twisted as to form a new chamber, receiving its blood from the usual source; its cavity was supplied by the normal amniotic fluid, and because of the partial interference of the blood-vessels an effusion into the sac.

TUBERCULOSIS OF THE TESTICLE.

WITH SPECIAL CONSIDERATION OF ITS CONSERVATIVE TREATMENT.

JOHN B. MURPHY, M.D.
CHICAGO.

(Continued from p. 1191.)

Association of Tuberculosis of the Testicle with Tubercular Lesions Elsewhere in the Body.—As stated above, in from 73 to 75 per cent. of persons dying from all causes, mediastinal glandular tuberculosis is present, and this in the majority of cases is probably the atrium of infection in the cases of testicular disease. The latter is not usually associated with pulmonary tuberculosis, though Reclus observed that 50 per cent. presented lung findings, and 2.5 per cent. of the pulmonary cases over 15 years of age suffered also from localization in the testicle. In his analysis of 500 cases of phthisis, 64 had involvement of the genito-urinary tract, 45 of the genital tract, and in 19 the testicles alone were affected. Simonds, from his post-mortem experience, found the genital organs involved in 2 per cent. of all tubercular children.

Tuberculosis of the lymphatic glands and bones is not often accompanied by disease of the genital organs.

In children, tuberculosis of the peritoneum sometimes coexists with disease in the testicles. Reclus thinks there is, in these cases, a communication between the cavity of the tunica vaginalis and the peritoneal cavity, the processus vaginalis.

Tillmans states that tuberculosis of the testicle almost always develops in persons already tuberculous, but this is not borne out by the experience of most surgeons.

In the majority of our cases the disease, so far as could be determined by physical examination and clinical history, was primary in the epididymis.

As a Part of a General Miliary Tuberculosis.—This is of but little interest to us in the consideration of this subject, because when it is present, it is overshadowed by the manifestations of the disease in other parts. Koenig states that the testicles are rarely affected in general miliary tuberculosis. When the involvement does occur, both testicles and both epididymi are affected simultaneously. Hutinell and Deschamps state that tuberculosis of the testes in children is seldom primary, but usually a part of a general infection.

Occurrence of the Disease in Misplaced and Inverted Testicles.—No authentic case of tubercular disease affecting an undescended testicle is on record, although several cases supposed to be such have been reported, one by G. Fischer, in 1864, and another by F. Roberts. The details of the cases in these reports are indefinite, so that it is very doubtful if they were really cases of tuberculosis. No satisfactory explanation of the apparent immunity possessed by these misplaced organs has been offered. In a case reported by Rushton Parker, of general tuberculosis, the left testicle was absent, and the left seminal vesicle free from disease, while the right testicle was present and the right vesicle involved.

Inversio-testis was noted by Koenig five times in his cases, and it is thought by him to be a predisposing cause. Case No. 13 of our series presents this anomaly in the testicle first attacked.

The right testicle is attacked first in the majority of cases. Rintelen (quoted by Senn) observed in 15 cases that the right organ was affected first in 10, and the left in 5. In 10 of our cases, in which an accurate history of the onset could be obtained, the right was involved first in 8, and the left in 2. Whichever organ is primarily attacked, it is usually only a question of time before the other becomes similarly diseased, this extension being due, in all probability, to transmission of the infectious material along the vas of the affected side to the prostatic urethra and down the opposite vas to the epididymis on the other side. Jullien states that in children the left testis is commonly affected first.

Pathology.—There has been and still is a marked diversity of opinion as to the location of the primary focus in the testis, and its method of extension subsequently, and a still greater divergence as to the relation which the testicular disease bears to tuberculosis of other portions of the genito-urinary tract, or of more distant portions of the body.

The epididymis is, in a very large percentage of the cases, first attacked. Cases have been reported (Reclus) in which the disease began in the testicle proper, but they are so very rare that practically they may be excluded. Gilbert Barling, M.B., reports a case of acute tubercular disease of the bodies of both testicles. In this case castration was performed, and caseous areas and tubercle bacilli were found in the bodies of the testicles, the epididymi not being involved. There was, however, a suspicion of phthisis in the right apex.

Most authors hold that in the majority of cases the globus major is first attacked, the infection spreading from there to the body and globus minor, and finally to the testicle proper. From our own observations, however, we would say that in adult cases the globus minor is most frequently primarily attacked, the body, globus major, and mediastinum testis becoming affected secondarily by continuity of tissue, or by extension along the surfaces of the seminal ducts. In children the primary nodule has usually been in the globus major.

The morbid anatomy of a testicle, the seat of tubercular disease, varies greatly, depending on the stage to which the process has advanced, the anatomical distribution of the lesion, and the presence or absence of secondary infection. We will not consider here the testicular affection which is a part of a general miliary tuberculosis. In the majority of the cases the epididymis is alone involved, and presents in the early stages one or more small nodules, situated in the globus minor or major. Later other nodules form in different parts, which enlarge and coalesce, converting the epididymis into a hard, irregularly shaped mass, which, at a still later period, after caseation and softening have taken place, may be soft and fluctuating. Section of the epididymis in the early stage shows the nodules to be composed of a homogeneous material, which has

largely taken the place of normal tissue, the latter being compressed and infiltrated with inflammatory products. The capsule of the epididymis is greatly thickened, and the vas, near its attachment to the globus minor, may be thickened and nodular, due to the infiltration of the tissues surrounding it, or to an involvement of its walls proper. Later the small nodules have fused with one another to form larger ones, the homogeneous material may be liquefied so as to resemble pus. Fibrous tissue may have been formed around some of the softened areas, and between them islands of normal or altered tubular tissue may be seen. The capsule now presents caseating areas, and the cellular tissues of the scrotum in its neighborhood may be edematous, infiltrated and adherent to it and the skin. When secondary infection has taken place, and frequently without it, the pus may have burrowed toward the skin, the abscess cavity ruptured, and a discharging sinus surrounded by thick fibrous walls formed. The fibrous capsule which surrounds the caseous areas may become infiltrated with lime salts, and in this way a thick shell of calcareous material, surrounding it or perhaps the entire epididymis, is formed. This was

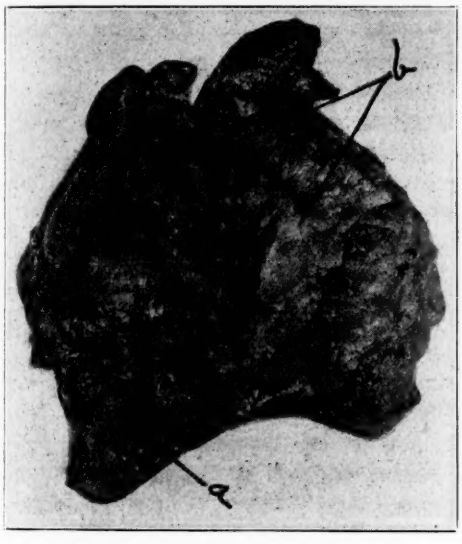


Fig. 5.—Showing involvement of testicle proper and epididymis, the former by extension from latter. *a.* Globus Major. *b.* Testicle proper.

beautifully illustrated in a case recently reported by Dr. H. G. Wells. In other cases the disease is not limited to the epididymis, but has also involved the testicle proper by continuity of tissue. (See Fig. No. 5) In these the epididymis presents the appearances described above, and scattered through the testicle proper are numerous small tubercular nodules in all stages of development. These nodules are most abundant at the periphery of the organ, where they are very small, and on section present the homogeneous appearance characteristic of young tubercles. In the mediastinum testis they are apt to be larger and caseous, showing that this was the part first affected by extension from the epididymis. The distributions of the lesions in the testicle proper indicate that the extension took place along the seminiferous tubules. Later, in the course of the disease, the nodules here, as in the epididymis, coalesce to form larger ones, these caseating, becoming encapsulated, or frequently breaking externally. Calcareous deposit may take place either in the fibrous capsule or throughout the broken-down nodules. The glandular portion is wholly or in part destroyed. The tunica vaginalis usually presents evidences of chronic inflammation, thickening and adhesions between the visceral and parietal layers, or, in some cases tubercular lesions. This involvement of the tunica vaginalis by the tubercular process is well illustrated in Fig. 6, which is a photograph of a testicle removed by Dr. Oswald. In this case the entire testicle had to be removed on account of the extensive involvement. An effusion into the cavity of the tunica vaginalis is present in most cases, but is usually small in amount.

Fig. 6.—Tuberculosis of Tunica Vaginalis. *a.* Tubercular areas. *b.* Epididymis. *c.* Healthy Tunica Vaginalis.

Spermatic Cord.—This is affected in a considerable proportion of the cases, but usually not throughout its entire length. The parts most apt to be involved are either or both of the extremities, the intermediate portion remaining free. In some cases, however, the entire vas is thickened and nodular (Senn).

The tubercular deposits in the cord are usually situated in the neighborhood of the vas, the infection having taken place by extension along the surface of its mucous membrane from the infected epididymis. All stages of development of the tubercular lesions are found here as in the epididymis, but in most cases have not advanced to the same stage. The mucous lining of the vas is greatly thickened, the outer layers of the wall being affected to a lesser degree. The connective tissue surrounding it may also present nodules and caseous areas, but much of the thickening is due to edema and inflammatory exudate.

Vesiculæ Seminales.—The vesiculæ seminales come next to the vas, as regards their frequency of secondary involvement. While usually these organs are involved

only after the vas has become more or less extensively diseased, this is not always the case. The process in them may be far advanced without the vas being affected at all, or the latter may present lesions which have evidently developed at a later period than those in the vesicles. Later abscess may form and the pus be discharged through the bladder or rectum, or externally through the perineum.

The Prostate.—This organ follows the vesiculæ seminales in order of frequency of involvement, though some observers (Kocher) state that it is affected much oftener than is commonly supposed, the disease in it being overloked on account of the absence of symptoms and physical signs in the early stages. The process here is the same as in other parts, the deposits going on to caseation and suppuration, and later rupturing into the rectum, urethra or externally. In most cases the prostatic lesions are in an earlier stage of development than those in the epididymis. The prostate and seminal vesicles may be affected unilaterally, and when this is the case, the side presenting the lesion usually corresponds to that of the diseased epididymis. It is more common, however, for the entire prostate or both vesicles to be affected.

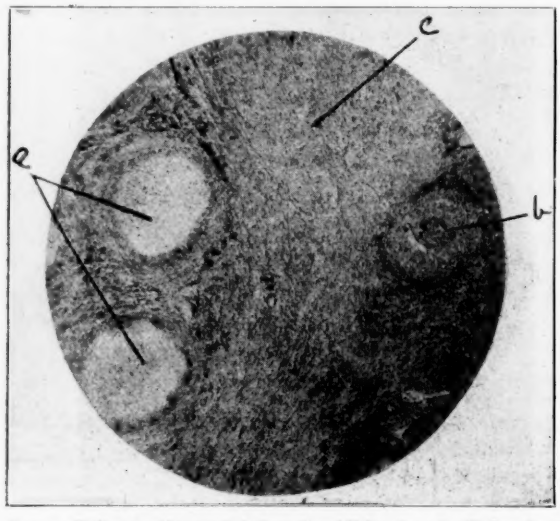


Fig. 7.—*a.* Cross sections of tube of epididymis. *b.* Tubercle with giant cell. *c.* Old fibrous tissue. From Case 11.

Microscopic Appearances.—The series of pathologic changes which follow the lodgement of the bacilli in the tissues is the same as in tuberculous lesions elsewhere in the body, modified somewhat by the anatomical structure of the organ. The bacilli, having gained access to the circulation by one of the channels mentioned above, lodge in the walls of the smaller blood-vessels of the epididymis and there produce their characteristic reaction. (Nepveau.) As to the exact situation of the starting-point of the process, there is great difference of opinion, Malassez and Reclus locating it in the walls of the seminal tubules; Virchow, Tizzoni, and Gaule, in the intertubular connective tissue; while Langhans, Curling, Kocher, and others believe it to be in the interior of the tubules themselves. Hutinel and Deschamps found the primary focus in the perivascular spaces in the cases examined by them. As in the majority of cases, the infection probably takes place through the blood-current, it seems reasonable to suppose that the primary lodgment of the bacilli is in the intertubular connective tisue of the epididymis, and this view is certainly supported by studies of tuberculosis in other organs.

The specific irritation set up by the bacilli and their products causes, first, an increased vascularity of the part, and then proliferation of the fixed-tissue cells, and emigration of leucocytes from the capillaries. In this way nodules of the so-called tubercle tissue are produced between the coils of the tube of the epididymis (Fig. 7), widely separating them from each other and encroaching upon their lumina. This tubercle tissue consists essentially of: 1, epithelioid cells, derived from the fixed tissue cells, connective tissue and endothelium of the blood-vessels and lymph-spaces; 2, the reticulum, in the meshes of which the epithelioid cells lie. This reticulum may be derived from the newly proliferated endothelial cells, or it may be the remains of the tissues which previously existed. Later, in addition to the tubercle tissue, the leucocytes, which at first were present in small numbers, become more numerous, especially at the periphery of the nodule. (Fig. 8.) It is in this so-called round-celled infiltration that we find the plasma cells, sometimes in great numbers and usually arranged in groups. These, according to different authors, may be derived either from the lymphocytes of the blood, or from the connective-tissue cells. Their function at present is doubtful, some claiming that they possess phagocytic properties; others that they have no such function, and are destined to become converted into fibrous connective tissue. Scattered through the tissue, usually occurring singly rather than in groups, are found the mast cells of Ehlrich, which are also of doubtful origin and function. The epithelioid cells may be mononuclear or polynuclear, giant cells (Fig. 9), which latter are formed by the proliferation of the nucleus of the cell without division of the cell body, and are usually found in the center of the tubercle, surrounded by the mononuclear epithelioid cells.

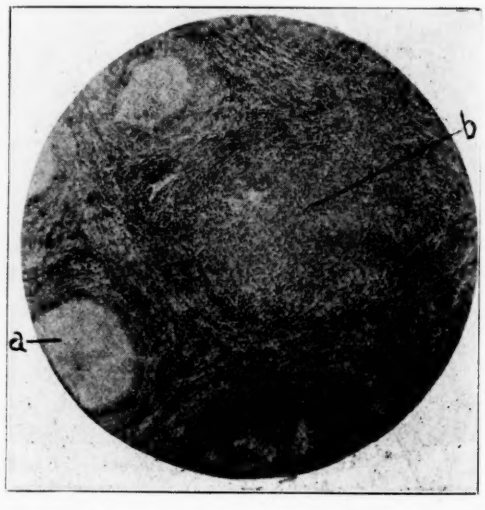


Fig. 8.—Showing young tubercle between coils of tube of epididymis. *a.* Tube of epididymis. *b.* Tubercle. From Case 11.

When the individual tubercles have attained a certain size, caseous degeneration sets in, due both to the action of the toxin and to the gradual shutting off of the blood-supply, and it is at this point that the process may be arrested by encapsulation, or that secondary infection, with destruction of a part or whole of the organ, may occur. If encapsulation takes place, the connective-tissue cells which have proliferated at the periphery of the tubercle, or tubercles, gradually contract and become converted into a dense fibrous tissue, in this way causing

an arrest of the process, the nodules remaining for an indefinite period of time.

During the progress of the changes described above, the coils of the tube of the epididymis are encroached upon and present a variety of changes. The epithelium may have entirely desquamated at the site of involvement, the cells lying loose in the lumen, which may be greatly dilated and contain pus-cells and granular debris, the remains of degenerated cells and spermatozoa. In other sections the lumen is filled with caseous material, which has probably come from the tubercles in the walls, rather than from the interior of the tube primarily. The duct may present in certain parts great dilatation and be filled with purulent material and spermatozoa. In these latter the epithelium may be intact or desquamated in parts.

Tubercle bacilli can usually be demonstrated in the sections, especially where the process is in the early stages. Later, after caseation has taken place, they may be so few in number as to escape observation, even on careful examination.

Reclus has described a rare pathologic condition in tuberculosis of the testicle, in which, instead of the

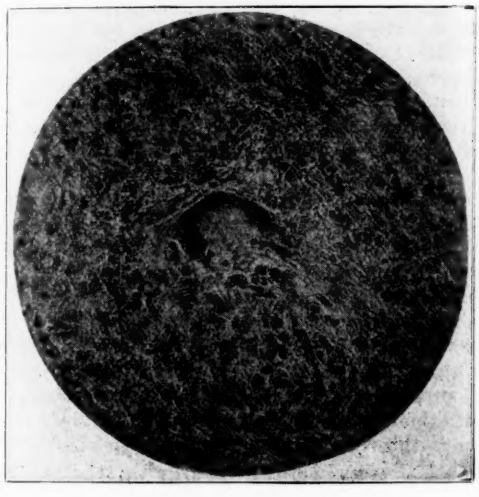


Fig. 9.—Giant cell in center of Tubercle. From Case 11.

changes described above, the epididymis presents a reticular arrangement, the alveoli of which are filled with pus.

Symptoms.—These differ materially, as in tuberculosis of other organs, varying with the rapidity of advancement of the process, the presence or absence of mixed infection, and again as the disease is primary or secondary in the testicle.

The symptoms of onset vary greatly at the different periods of life. In infants and young children the parents' attention is usually first called to the presence of a small nodule in the epididymis, the child having manifested no other symptoms, except perhaps slight tenderness in this region.

In adults the initial symptoms may be sudden or gradual in their onset, the latter being much the more common of the two. When associated with mixed infection, the onset is stormy, and there are all the manifestations of an acute epididymitis, resembling the gonorrheal form. (Case 10.) Abscess formation may be rapid, and the pus find its way to the surface in a short time, leaving a sinus that heals slowly. Instead of breaking externally, the burrowing may be in the direction of the testis proper, and a portion or all of this organ be destroyed. Rupture into the cavity of the tunica vaginalis must be extremely rare, if it ever occurs.

When unassociated with mixed infection, the onset is slower, and many of the patients come to the physician for the first time because of the nodule which they have accidentally discovered in the epididymis. They are usually unable to say how long it has been there, but in some instances date its development from a slight injury or a gonorrheal epididymitis. The nodule or nodules are at first painless and only slightly tender on compression; but usually after a short time the patient experiences a dull, aching pain in the testicle, brought on or aggravated by exercise. This pain may be referred to the testicle or upward along the spermatic cord, sometimes even extending into the ilio-lumbar region of the same side. It is rarely severe, and may be entirely absent when the patient is at rest.

A urethral discharge, usually whitish and mucoid in character, has been noted in a considerable proportion of the cases, usually quite early in the course of the disease. Instead of being white, it may be purulent or

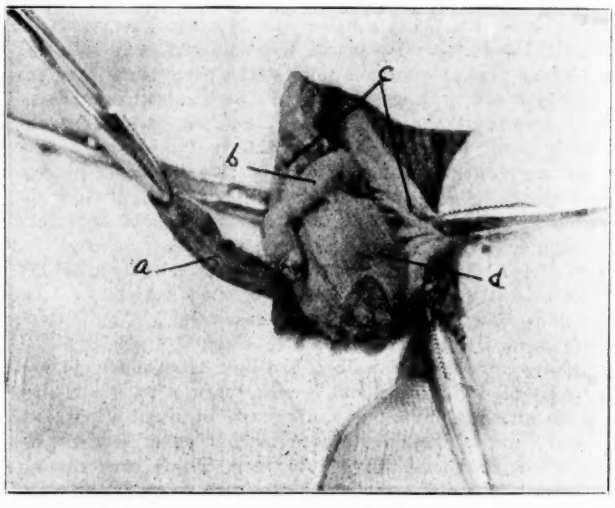


Fig. 10.—Globus Minor and body of epididymis dissected from testicle proper. *a.* Globus Minor and body. *b.* Globus Major. *c.* Reflected tunica Vaginalis. *d.* Testicle proper.

even bloody. Various theories have been advanced as to the origin of this discharge, some claiming that it is due to tuberculosis of the prostate, vesiculæ seminales, or the prostatic urethra, while others believe it is caused by a catarrhal condition of the posterior urethra and seminal vesicles. The latter is probably the true explanation, as it disappears after castration or epididymectomy. Symptoms of vesical irritation are present in the great majority of cases without mixed infection, and in some they are the first to attract the patient's attention. At first, there may be slightly increased frequency of urination, with perhaps a little burning during the act, referred to the base of the bladder. As the case progresses, the irritability becomes more marked until the patient is unable to retain his urine more than fifteen or twenty minutes at a time, involuntary passage taking place if he attempts to do so. Later, also, tenesmus develops, and may become very severe. The fact that vesical symptoms are usually absent in the cases with secondary infection is to be explained, in all probability, by the edema and swelling of the vas, which does not permit the irritating material to pass through it to the vesiculæ seminales.

(To be continued.)

BUBONIC PLAGUE IN SAN FRANCISCO.

FURTHER CASE REPORTS.

CASE 19.—Moon Li Chee Yung, age 30, mongolian female, resided at 802 Dupont, died October 31. A bubo was found in the left femoral region. An incision showed a necrotic lymph-node about the size of a walnut, the surrounding tissue being infiltrated with a bloody fluid. Smears from the gland substance showed plague bacillus. The diagnosis was confirmed by inoculating a guinea-pig, from which pure cultures of the germ were obtained. Pure cultures were also obtained direct from the gland.

A Chinese school-teacher died in these same rooms on September 12, of this year, supposedly of pneumonia. She was taken sick suddenly, had a severe chill, high fever, and died in four or five days.

CASE 20.—Yung Wah Noui, a mongolian female, age 9, resided and died at 802 Dupont, a daughter of the preceding case, and died twenty-four hours after her mother, after displaying similar symptoms. The autopsy was held twenty-four hours after death. Decomposition was well advanced; there was no enlargement of the superficial lymph-nodes. Smears of sputum stained showed the presence of a bipolar staining bacillus. The entire left and the lower lobe of the right lung involved in a bronchopneumonia. The pericardium contained a bloody fluid, the heart muscle was soft and the ventricles filled with blood-cots. The spleen was enlarged, very soft, and its structure partially broken down. The peritoneum over the small intestines was congested. There were submucous hemorrhages throughout the small intestines. The vessels of the mesentery were injected. The mesenteric lymph-nodes were soft and very dark in color. No ulceration in the intestines. Smears of the spleen, lung, and mesenteric glands show the plague bacillus. A guinea-pig was inoculated and died four days after displaying typical plague lesions.

CASE 21.—A female nurse, 28 years of age, entered a hospital in this city on October 31, 1900, with a history of exposure to diphtheria, having nursed a case from 7 p. m. October 21 till 1 a. m. October 22. This case, Samuel Fluth, aged 19, said to have come from San Jose, had been treated for typhoid fever by his physician for about a week, when, after a consultation with another physician a diagnosis of nasal diphtheria was made, and a death certificate to that effect sent to the health office on the death of the man, which occurred six hours later. The girl complained of severe pains all over the body, especially in the abdomen. Temperature 40 C., pulse 104, respirations 33. There were no throat symptoms at any time. An injection, supposedly diphtheria antitoxin, had been administered in the left forearm by Dr. E. R. Wisner. The patient refused to say where she had been in the interval after leaving her last patient before entering the hospital.

The case was immediately placed in the contagious building. The following day, the pain continued, accompanied by tympanites, and turpentin stupes were applied. Toward evening the condition was improved, the temperature falling to 37.4, and abdominal pain and tympanites lessening. A cellulitis was now seen developing on the inner side of the left arm near the axilla, but no swelling of the axillary glands. The following day, November 2, the arm became very painful and the temperature rose to 38.5 at 7 p. m. At 2 a. m. November 3, there was some weakening of the pulse, and stimulants were given, and the condition improved. At 3.30 a. m. she passed urine containing blood, and spat blood-tinged mucus. Hemorrhagic petechiæ appeared around elbows and ankles, temperature dropped to 36.6, pulse grew weaker, and death occurred at 4 a. m.

Autopsy Report: External appearance: Subject a well-developed young female. Rigor mortis marked. Cadaveric lividity on dependent aspect, especially marked about head and neck. Purplish red spots, not raised from the surface, about both ankles, both knees and both elbows. Inguinal glands slightly, but not markedly enlarged. Axillary and cervical glands not enlarged. No noticeable change in left forearm where antitoxin was injected.

Abdominal inspection: Muscles and subcutaneous tissues firm, well developed. Peritoneum markedly injected over entire extent, especially about cecum. About three ounces of free, non-clotted blood at bottom of pelvis. Stomach considerably dilated and displaced downward, lower border 2½ inches below umbilicus. Other organs in normal positions. A few enlarged glands in mesentery, size of a bean. Appendix free from adhesions.

Thorax Inspection: Pericardium filled with straw-colored fluid. Lungs free. No fluid in pleural cavities.

Examination of organs: Spleen was enlarged, deep purple color, extremely soft and friable; on section minute glistening points, size of pin-points, scattered throughout—cultures and cover slips taken. Stomach was dilated and displaced downward; contained yellowish curdy fluid; mucosa covered with purplish spots size of a pea. Left kidney was about normal size; capsules strip readily; on section considerable fluid-blood oozes from surface; cortex injected; substance soft—cultures and covers taken. Right kidney was similar. Liver was normal size, fatty. Gall-bladder's peritoneal surface covered with purplish blotches, irregular in shape—subperitoneal hemorrhages. Small intestine had scattered throughout its length, small whitish-gray elevations similar to tubercles; here and there are purple spots—submucous hemorrhages—most marked and in greater number in the lymphoid follicles. Large intestine: The caput coli is thickened, grayish color; its surface covered with innumerable whitish-gray elevations similar to those in small intestines, but more numerous; besides these are submucous ecchymotic spots. Appendix was free from adhesions; vessels injected; submucous coat infiltrated with blood. Mesenteric glands showed a chain of five enlarged to size of a bean, soft; no hemorrhages inside—cultures taken. Fallopian tubes were congested and purplish in color; these extend over posterior surface of uterus. Left ovary contains a Graafian follicle on point of rupture. Uterus, normal size. Either cornu contains a soft reddish material—cultures taken. Heart enlarged, muscle rather soft; right auricle greatly dilated, filled with clotted blood; all the cavities are filled with soft red clots; mitral valve thickened; aorta contracted; aortic valve slightly thickened and opaque; tricuspid and pulmonary valves normal; the endocardium of right auricle is dull, lusterless, and has a pinkish-red color, looks as if covered with a red scum, this appearance noted in all the cavities, not so marked as in right auricle—cultures and slides taken. At root of left lung about a half-dozen whitish spots size of grain of sand, look similar to tubercles; lungs otherwise normal.

Pathological Diagnosis: Septicemia, with tendency toward minute hemorrhages in tissues; cause probably B. pestis. Septic spleen, fatty liver, gastroptosis and submucous hemorrhages in stomach, septic enteritis and colitis, acute septic nephritis, hypertrophy of heart, chronic mitral—thickening—regurgitation, hemorrhagic necrosis of endocardium.

Bacteriologic Examination: The blood was found full of plague bacilli. There were enormous numbers of them in the spleen; they were obtained in pure culture from the spleen. Guinea-pigs inoculated with spleen tissue died within thirty-six hours of typical plague septicemia. The spleen and peritoneal cavity contained an exudate full of the bacilli. The body of Samuel Fluth, the young man attended by this nurse, was exhumed and examined by the city bacteriologist, Dr. Kellogg. The body was found very much swollen, indicating rapid decomposition; pieces of tissue were taken for examination.

Post Operative Irrigation of the Bladder.—By continuous irrigation after suprapubic cystotomy, danger of infection and infiltration of urine is obviated. The wound heals by first intention and if the bladder is painful, the hypersensitiveness is diminished. Dandoy related at the International Medical Congress that the recovery was surprisingly rapid in the two cases he described. The wound was sutured except where a Guyon-Perries tube was inserted, bringing the water from a reservoir above, the flow regulated by stopcocks. A Nélaton with irrigator was introduced into the bladder through the urethra, and the irrigation continued for four to six days.

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MEDICAL LIBRARIES IN SMALLER CITIES.

Excellent public libraries are springing up in our thriving smaller cities of 20,000 to 50,000 and more inhabitants. These libraries are partly the result of endowment by wealthy and public-spirited persons, partly of wise appropriations by the municipality. And smaller libraries are being established quite generally in cities of less size as well as in villages. While the larger centers are rapidly acquiring good medical libraries, thanks largely to concerted action by interested persons in the medical profession, little or nothing has been done as yet toward securing library facilities of a medical character for smaller cities and the territory naturally tributary to them. There is unquestionably good room here for undertakings of this kind. There is no need for argument in favor of the value of medical libraries within the convenient reach of physicians, whether in the city or in the country. One of the reasons for the reluctance of the young physician to leave the larger cities is the absence elsewhere of medical libraries.

The renewed activity of the smaller local societies and the tendency to make them the basis of larger associations, all modeled according to a more or less common plan, speak well for the truly professional spirit of our medical men. Medical libraries would strengthen the solidarity of the profession wherever they may be established. By a system of loaning out books and journals they could be made of great service to the country practitioner and the physician in the smaller cities and villages. Local societies might well canvass this matter. The local situation may determine different modes of action. By means of a small annual income, judiciously expended, a few years would lead to useful collections of medical literature, sure to receive substantial accretions from private libraries from time to time and from exchanges with other libraries.

Perhaps the question of housing, in a proper manner, libraries of this kind may be a difficult one to meet. When larger public libraries already exist, it may be that these could be induced to set aside the necessary space for the books and journals. These public libraries not infrequently occupy pretentious buildings. In other cases local hospitals might furnish the necessary rooms; and then again, suitable space may be rented at a comparatively insignificant figure. The matter is largely one of enterprise. Energetic action on the part of a few men in a district would surely carry the matter to a successful issue. It should always be borne in mind that a library to be successful must be more than a collection of old and discarded text-books. These have their place, but it is not an important one. A successful library must contain indexes, dictionaries, encyclopedias, and, especially, living medical literature, that is, journals and current publications. Private libraries, in the great majority of cases even, only partly fill the needs of the owner, and the expense and difficulties of maintenance absolutely preclude their ever supplanting the need of public libraries. The right use of medical literature is acquired slowly. Its preservation in accessible form is a prerequisite for its proper appreciation and the unfolding of greatest usefulness. Local medical libraries tend to broaden the views and to increase the scholarship of their supporters.

THE DIAGNOSTIC SIGNIFICANCE OF BENCE-JONES ALBUMOSURIA.

In the middle of the present century, Bence-Jones described a peculiar reaction of the urine, namely, the occurrence of turbidity on heating, or of a precipitate on addition of nitric acid, but clearing up on further heating and recurring on cooling. The substance on which this reaction depends was further found to be precipitable by alcohol, the precipitate being soluble in water. The body was recognized to be an albuminoid substance, but only many years later was it shown by Kühne to be an albumose, differing in its relations, however, from other albumoses. Since then not many cases have been placed on record in which the urine is reported to have this reaction present. The first two were considered to be instances of osteomalacia, and almost all of the others have been attended with disease of the bone-marrow for which the designation "multiple myelomata" has been proposed. The symptoms present in these cases were in part referable to the osseous system and in part anemic in character. The former include severe pain in the nape of the neck, the shoulder, the chest and the back, rarely in the upper extremities, usually occurring in paroxysms without appreciable cause, but aggravated by movement. The cervical or dorsal spine, as well as one or more of the ribs, were at the same time tender, and in some instances the seat of circumscribed prominences. In most cases, deformities of the cervical and dorsal spine and of the thorax developed in the course of time, resulting in marked kyphosis, and protrusion of the sternum, in consequence of angulation of the ribs, as a result of spontaneous fracture. Sometimes profound nervous disturbances occurred—radiating neuralgiform pain, visceral pain, bulbar symptoms, and typical symptoms of compression of the spinal cord. Death resulted from these complications or from progressive cachexia or intercurrent disease. Although multiple myelomata have been present in almost all of the cases in which

albumosuria has been observed, all cases of multiple myelomata have not been attended with albumosuria.

That other diseases of the bone-marrow, however, may be associated with albumosuria is demonstrated by a case of lymphatic leukemia reported by Askanazy.[1] The patient was a man 51 years old, who, a year before coming under observation, began to complain of undue readiness of fatigue. In the course of six months progressive enlargement of the cervical lymph-glands took place. Following convalescence from an attack of pneumonia at a later date the legs became swollen and an abdominal tumor made its appearance. The patient was pallid and cyanotic. The cervical and axillary lymphatic glands were moderately enlarged, and the chest was the seat of numerous small, subcutaneous enlargements. The abdomen contained a glandular tumor as large as a man's head, and smaller nodules were palpable in the rectovesical space. The bones exhibited no alteration. The blood presented changes characteristic of lymphatic leukemia. The urine contained albumose in abundance. Deaths resulted from pulmonary edema, and post-mortem examination confirmed the clinical diagnosis. A study was made to determine whether the substance found in the urine was present also in the bone-marrow, the tumor-masses, the blood, the pericardial fluid and the pleuritic exudate, with the result that albumose was detected only in the bone-marrow.

Examination of the urine in another case of lymphatic leukemia failed to disclose the presence of albumose. The opinion is expressed that Bence-Jones albumosuria is a manifestation of disease of the bone-marrow and generally multiple myelomata, although exceptionally it may result from the presence of other diffuse, lymphoid alterations in the bone-marrow, such as are observed in cases of lymphemia.

1. Deutsches Archiv f. klin. Med., lxviii, 1 u. 2 H., p. 34.

CEREBRAL ABSCESS FOLLOWING TYPHOID FEVER.

Pyogenic micro-organisms may gain access to the brain and give rise to the formation of an abscess through direct injury or through metastasis from a primary focus of suppuration, contiguous or remote. The most common single etiologic factor is disease of the middle ear, while the disorder is rarely a complication of the infectious diseases. A case in which an abscess of the brain developed in the sequence of an attack of typhoid fever, and giving rise to symptoms of focal epilepsy, with successful operation and discovery of staphylococci in the pus, is reported by A. C. Brown.[1] The nervous symptoms made their appearance during convalescence from the fever, and infection is thought to have taken place from the intestinal tract through the medium of the ulceration of the bowel. There was no history of injury and no evidence of middle-ear disease, or of any other suppurative process. The patient was a girl 19 years old, and the first manifestation consisted in twitching of the left side of the face, the left arm, and the left leg, followed by paresis. Later, headache and vomiting set in. On one occasion the patient became conscious of noises in the right ear, numbness of the left hand and a sensation as if the left hand and arm were being gripped, passing gradually up the arm to the left side of the face and head. The left hand then began to shake. The painful gripping sensation in the hand and arm gradually passed off, but the left leg began to shake violently and the shaking in the left leg passed up the arm. In a short while the left leg was found heavy and powerless. Loss of consciousness supervened and persisted for ten minutes. When conciousness returned the head was drawn to one side and the eyes rolled. For a few minutes the patient was unable to speak. There was a mist before her eyes and her head ached badly. For two hours she felt unable to move, as the left arm and leg were still heavy and powerless. On getting up there was a tendency to fall to the left, and a limp that had been present in the left leg since the attack of typhoid fever, was distinctly more pronounced. The patient grew gradually worse and at a later date an early stage of optic neuritis was discovered. Headache persisted and the twitching and weakness of the muscles of the left side of the body increased. The knee-jerk, elbow-jerk and the supinator-jerk on the left became exaggerated, and ankle-clonus could occasionally be elicited.

In the diagnosis, hysteria, tuberculosis and syphilis were excluded, and the conditions were thought to be due to a rapidly growing glioma, though the possibility of abscess was considered. Operation was undertaken, with the result of finding an abscess in the right motor region, involving the ascending parietal and ascending frontal convolutions. The pus, in which bacteriologic examination disclosed the presence of the staphylococcus pyogenes aureus, was evacuated and drainage provided for. The further course of the case was noteworthy only for the marked improvement that took place, the patient recovering entirely the use of her leg and to a great degree also that of her arm.

Suppuration is not an uncommon complication of typhoid fever, the typhoid bacillus being sometimes found in the lesions; but abscess of the brain is rare. Indeed, Brown believed that his case is the first that has been reported in the sequence of an attack of typhoid fever, but Keen[2] refers to three cases recorded in the literature, without bacteriological findings, however.

1. Edin. Med. Jour., September, 1900, p. 228.

THE VITA PROPRIA OF HUMAN CELLS.

The vitality which is characteristic of and belongs to the individual cell—the vita propria of the cell of Virchow—has received comparatively little study. Grawitz claims to have observed that the corneal corpuscles withstand drying as long as eleven days, but the correctness of his observations has been questioned.

2. "Surgical Complications and Sequels of Typhoid Fever," Phila., 1898, W. B. Saunders.

Busse states that ciliated epithelium in the covering of nasal polypi may maintain the motion of their cilia for eighteen days after separation from the matrix. Spermatozoa are said by Schade to manifest evidences of vitality for a considerable time after the death of the body as a whole and after having been expelled from the living organism. This persistence of the life of spermatozoa is of medicolegal interest. Living spermatozoa have been demonstrated in the rectum of a boy eight days after death at the hands of a pervert, the body lying in water at a temperature of about 0 C. Ljunggren's study of the power of epithelial cells to live outside the body are of great interest, and recently Grohe[1] has studied the vita propria of the cells of the periosteum of rabbits. The pieces taken from the tibia and the radius were kept at a temperature between zero and 4 C., because at low temperature the vitality of various cells has been found to persist longer. At various intervals the pieces were transplanted into the muscles of the arm and thigh of animals of the same species. Without going into details, suffice it to say that the cells in the inner layer of the periosteum in numerous instances were found to retain their osteoblastic powers for from forty-eight to one hundred hours after removal from the body, producing, when implanted, osteoblasts which formed islands of cartilage and osteoid tissue. In twelve days, a piece of periosteum, kept one hundred hours, formed a mass as large as a hazel-nut composed of hyaline cartilage and osteoid tissue.

Morpurgo[2] calls attention to the almost forgotten observations of Mantegazza on the survival of periosteum and of human and of frog spermatozoa, and of those of Bizzozero on the vita propria of ciliated epithelium, bone-marrow cells and smooth-muscle fibers. Morpurgo himself demonstrated that the cells of the periosteum of chickens may retain their vitality outside of the body for one hundred and ninety-two hours, when kept at 3 to 6 C., and for one hundred hours when kept at 40 to 41 C.; at the end of these periods bone was produced by implantation. The favorable action of cold is ascribed to its restraining influence on vital processes in consequence of which the reserve food lasts longer.

Wentscher[3] shows that the epithelial cells of the skin possess a greater surviving power than indicated by Ljunggren's experiments, in which an attempt was made to nourish the cells by preserving them in serum. Wentscher employed Thiersch grafts, taken from the outer aspect of the thigh and kept in sterile salt solution or in cotton in an empty bottle; the latter method gave best results. He obtained positive evidences of life, in the form of mitoses in the cells of pieces thus preserved and grafted on crural ulcers, in the case of the wet specimens after ten days, and in the case of the dry, after twenty-two days. The pieces kept dry became hard and it was necessary to soften them before grafting; on softening, the epidermis was permeated by fluid and expanded again. In the successful experiments—twenty-one in sixty—there was a permanent return, or revivescence, of all vital characteristics, and the subsequent events were the same as in transplantation of fresh pieces.

Cardile found that leucocytes kept in bouillon under favorable circumstances remained alive for seven days outside the body.

These illustrations of the vita propria of the cells indicate that Grawitz is not so far from the truth when he says: "Perhaps weeks may pass before the life in the last cell ceases."

1. Virchow's Archiv, 1899, clv, 428.
2. Ibid., 1899, clvii, 170.
3. Ziegler's Beiträge, 1898, xxiv, 101.

THE MOSQUITO AND YELLOW FEVER.

The evidence adduced by Drs. Reed, Carroll, and Agramonte that the mosquito is the carrier of the infection of yellow fever, has called out other evidence or suggestions. The freedom of the Southern piney woods region from yellow fever has been noticed before. It is said that the disease never spreads there, and the fact was generally attributed to some peculiar influence of the pines. Now it is claimed that the absence of the mosquitoes in the pine woods may account for the freedom from the disease, previously credited to some medical virtue of the trees. Another thing noticed in the South as corroborative of the mosquito theory, is that, while the yellow-fever infection seems sometimes to survive a cold winter, it disappears after a slight frost, which also makes an end of the mosquito. These are not yet scientifically demonstrated facts, but they may be worth looking into and verifying if possible. There is ample room for further study as to the nature and etiology of yellow fever, and every little helps.

LAY USE OF THE CLINICAL THERMOMETER.

An enterprising firm which manufactures clinical thermometers, is advertising its instruments to the general public in some of the magazines. There does not seem to be any reason for an objection from the medical profession to this procedure. On the contrary, it is probable that the intelligent use of the clinical thermometer by the laity may be the means of enabling the family physician to see many cases of illness at an earlier period than would otherwise be the case; and it would often obviate the necessity of responding in person to a night call, as the record of the clinical thermometer transmitted by telephone would usually enable the physician to properly estimate the immediate gravity of the case. The advertisement referred to advises people to regularly take the temperature of themselves and children, which is neither advisable nor practicable. A reading taken when there is any feeling of malaise, might be of assistance to the physician in enabling him to see the case in the primary stages of disease and in aiding him to arrive at an early diagnosis. On the whole, it would seem to be advisable for physicians to encourage the intelligent use of the clinical thermometer.

THE ACTION OF COLD AND HEAT ON THE INTESTINES.

Observant individuals have long noted that, after having taken a purgative, exposure of the surface of the abdomen to cold, as a draught of cold air, is very likely to produce a colicky pain. Conversely, many people, who on slight cause suffer from acute diarrhea and cramps, have found that protecting the abdomen very carefully from damp and cold is effective in reducing the frequency of attacks. People living in the tropics, where diarrhea and dysentery are always at hand, have learned to wear a woolen binder about the abdomen, as it has been found to very materially reduce the danger of contracting these diseases. So true has this been found that the British army furnishes its troops serving in the tropics with flannel binders, and our own troops when going to Cuba were in part so supplied, but had not the necessary experience to ensure their intelligent use. There seems to be a definite relationship between exposure of the surface of the abdomen to cold and damp, and the production of diarrhea, either mild or severe. The relief afforded by the application of external heat in intestinal colic is well known.

ORIGIN OF LEPROSY IN HAWAII.

The introduction of leprosy in Hawaii, from recent statements, seems to have been under the special protection of the native royalty and aristocracy. It first appeared in the person of a chief Kakauonohi, who had been to China, and from him was transmitted to another Naea, who was closely related to the reigning family. From the latter it quickly spread to his tenants and retainers, and for a considerable time was known among the natives as the "ma'i alli," or the chief's, or royal, disease. The missionary physicians soon learned to recognize it and one of them, Dr. Dwight Baldwin, it is said, made a report on it, stating the facts of its origin, etc., and filed it with the minister of the interior, but it was held from publication, doubtless on account of the connection of royalty with the introduction of the disease. So long as the Hawaiian monarchy existed, segregation of lepers, though legally demanded, was very imperfectly carried out, owing, it is said, to the interference in high places. Since the overthrow of the monarchy, however, the measures have been more effective and the seeing of lepers on the streets, which was formerly an occasional event, is no longer possible. The isolation law is an unpopular one with the native Hawaiians, who possibly regret the passing of the old régime on that account as much as on many others. These data are obtained from the Honolulu *Commercial Advertiser*, whose authority for the main facts is the Rev. Sereno Bishop, who was one of the earliest to recognize the affection on the islands. We have not seen this bit of medical history narrated elsewhere.

SCHOOL INSPECTION IN CITIES.

The advantages of the Chicago school inspection were set forth in a communication made October 30 to the Board of Education by Dr. A. R. Reynolds, health commissioner. Since the beginning of the year over 75,000 children have been detained by school principals for medical inspection, and of these 4539 were temporarily excluded from school on account of danger of contagion, and in 711 a bacteriologic examination was made to confirm the inspector's diagnosis. The results of this care are a very notable decrease in the mortality from those disorders that are especially fatal to children, such as diphtheria and scarlet fever. The average mortality from diphtheria for the ten years, 1890 till 1899 inclusive, during the month of September has been 85.5, or about 4.5 per cent. of the total deaths. For October the like figures are 127.9 and nearly 7 per cent. Prior to 1890 the figures are still higher for years in which accurate statements are available. During the past two months, September and October, 1900, there were 42 and 77 deaths respectively from this cause, certainly a notable reduction. Similar results could be cited as regards scarlet fever, and for other months. It is hardly necessary, however, to demonstrate the value of school inspection by object-lessons such as these, though they are impressive to the laity. The dangers of contagious disorders in schools are sufficiently obvious, however much they have been ignored in times past. One of the advantages of the inspection will be the impression it makes on the teachers themselves, and the reinforcing their feelings of responsibility in regard to these matters. Too many of them have heretofore had no idea whatever of the risks to health and life that a little inattention on their part may involve. The mere fact of arousing them to observe morbid symptoms must be one of the greatest value as regards the health of the school children and the community, and, with an intelligent inspection added, goes far to insure against serious results from school epidemics of contagious diseases. The value of the human life saved, to say nothing of the suffering, bereavements, and disease prevented, infinitely outweighs the comparatively trifling cost. Municipal authorities who wilfully neglect this precautionary measure on economic grounds may have human lives charged up against their account.

A NORTH-AMERICAN MEDICAL ASSOCIATION.

The *Dominion Medical Monthly* editorially comments on the suggestion of the *New York Medical Journal*[1] that Canadian physicians be admitted to membership in the AMERICAN MEDICAL ASSOCIATION. The proposition appears to strike our Canadian confrère favorably. It enumerates some of the advantages that would thus ensue to Canadian practitioners; the closer associations with the great body of medical men on this continent and the advantages of THE JOURNAL to Canadian physicians are specially noticed. There is no question that there are many reasons why it would be advantageous to both Canadians and Americans to come together on common ground in medical matters, and membership in the AMERICAN MEDICAL ASSOCIATION would be the most available means to this end. There is only one possible objection, and that would not affect the scientific side of the question. The AMERICAN MEDICAL ASSOCIATION has often to deal with matters exclusively American, questions of legislation, etc., and it would be manifestly improper to have those not directly interested have a voice in the decision. This, however, would not affect general, non-

1. See THE JOURNAL, July 21, p. 181.

voting membership, with all the scientific and social privileges, provided there was a way by which this could be legalized. At present, Canadian physicians can become members only through membership in an affiliated organization. If there could be a rule adopted whereby membership in the Canadian Medical Association, or affiliated bodies, would qualify for non-voting associate membership or something of the kind, in the AMERICAN MEDICAL ASSOCIATION, and vice versa, it might work to the mutual advantage of both bodies. From the scientific viewpoint, Canadian physicians should be more nearly affiliated with their fellow members of their profession in this country than with any others, and scarcely anything would be more effective in bringing them together than such an arrangement as proposed above. The suggestion is, in any case, deserving of thought.

PARESIS AMONG THE JEWS.

In the London *Lancet* of October 27, there is an interesting editorial analysis of an article by Beadles, of Colney Hatch Asylum,[1] on insanity among the Jews. One of the most interesting observations made by this author is that of the great preponderance of paretic dementia in this race. Thus he found that 21 per cent. of all male Jews admitted in the London County asylums were paretics, while the proportion in the average asylum population of England is, according to the most recent report of the Commission in Lunacy (1899), only 13 per cent. In female Jews the ratio is not above that of insane females generally, and we find, therefore, that paresis is 60 per cent. more frequent among Jewish men than among other male patients of English asylums. The predominant cause, or at least antecedent, of paresis is syphilis, and this fact is therefore of the most interest, since it is often claimed that specific disease is rare among Israelites. It is a well-known and, we believe, generally admitted fact that the Jewish race is neurotic to a greater degree than others, but their greater liability to paresis has not been before brought prominently into the light. It is possible that the reason is not so far to seek as might at first appear. Syphilis by itself is not necessarily a cause of paresis, the added factors of excesses, and especially of mental stress, are probably required. The dominating idea in the average city Jew, even more than the non-Jew, is business, and they are particularly liable to this chief exciting cause. Many of them are speculators and therefore especially under the strain of mental anxiety in the vicissitudes of business. Syphilis may be rarer in Jews than in others, but they are nevertheless its victims to a certain extent, and Beadles finds sexual excesses playing a large part in the alleged causes of insanity among them. Many of the Jews of this country, and Great Britain also, come from parts of Europe where syphilis is far more common than here, in certain parts of Russia, for example, where it is said to be endemic in the lower grades of the population. All these considerations are to be taken into account and may serve to render more intelligible the fact announced by Beadles. It would be of interest to have results of similar studies in the asylum population of other sections, the metropolitan asylums of this country for example.

1 Jour. Ment. Sci., October.

THE PLAGUE IN SAN FRANCISCO.

In the latest "Public Health Notes," of the Marine-Hospital Department, Surgeon Kinyoun reports three cases of the plague occurring among the Chinese in San Francisco during the month of October, and expresses his opinion that the area of infection is growing wider and that conditions favor its further outbreak. His report is dated October 29, and, as will be seen elsewhere in this issue, our correspondent has sent in details of three more deaths which occurred October 31 and November 1; one of them was a white woman, a professional nurse, who had been attending a fatal case reported as "nasal diphtheria." This case is being investigated and may possibly furnish further revelations. There does appear, therefore, to be some ground for apprehension of further trouble and need of more energetic measures on the part of the local authorities than have been attempted heretofore. The existence of the Chinese quarter in the business center of San Francisco is a peril to health at any time, and all the more when it includes active plague-foci, which there is too much reason to fear is now the case. There is no city in Europe or America that has met the peril of the plague in the way San Francisco has done, and this is not said in commendation of her course. It may be, as some French alarmists have said, that there have been concealed outbreaks in some southern European ports, but there is no place where the press and public have so persistently fought the necessary sanitary measures in their desire to prove that the plague did not exist among them. It would be a business misfortune to be quarantined against, but it is taking serious chances to ignore a possible danger in the hope that it may pass off without actually developing to any great extent. If the plague should become a little more an undeniable reality than it is at present, the residents and business men of San Francisco, and possibly others, may have ample reason to regret the course that has been thus far followed. The methods of the ostrich are not always the best; and certainly not the most courageous in meeting such a danger as the bubonic plague.

THE SLEEPING SICKNESS.

This disease is confined to the tropical part of West Africa. Within the last few years three cases have been brought to England for the purpose of study, the results of which have been made public recently by Manson, Mott, and Mackenzie.[1] It is a chronic disease, which when introduced into a village may persist for years and cause serious loss of life. The leading clinical characteristic of sleeping sickness is physical and mental lethargy, which begins almost imperceptibly. In the fully-developed disease the patient is almost always asleep; muscular tremor and an itching papular eruption are quite constant. The deepening lethargy and muscular weakness finally render the patient bedridden; death occurs after much wasting, either in an epileptiform seizure or from some intercurrent disease-infection, bedsore, diarrhea, etc. Post-mortem examinations so far recorded have not shown any characteristic naked-eye abnormality. In the blood, Man-

1. Trans. London Path. Soc., 1900, li, 99-124.

son has found, in several cases, sometimes in great abundance, a peculiar worm, named by him "Filaria perstans." The geographic distinction of this worm and of sleeping sickness corresponds fairly well; but it has also been found in the blood of healthy persons. Perhaps additional factors come into operation which are not now understood, if F. perstans is the cause of the disease. The mode of action of the parasite would then become a most interesting subject for study. Mott describes the changes in the central nervous system in two cases of African lethargy. The principal lesion was a meningo-encephalo-myelitis, which may be readily construed as produced by a poison that affects especially the lymphatic system of the central nervous organs. As indicated, the pathology of these lesions, which may be regarded as the proximate lesions, awaits full explanation until the true cause of the sleeping sickness has been established. The case of sleeping sickness exhibited by Mackenzie,[2] in 1890, showed the same meningo-encephalitis as in Mott's two cases.

2. Trans. Clin. Soc., 1890, xxiv.

Medical News.

ALABAMA.

THE BANDAGE-ROLLER MANUFACTURING COMPANY has been organized in Selma, with the object of manufacturing a mechanical appliance for rolling bandages of all kinds and sizes.

DR. WILLIAM H. SANDERS, state health officer, will make an effort to induce the coming legislature to provide adequate compensation for county health officers. He says that under the existing system, one county pays the county physician only $5 a year, and many others pay only $25.

THE STATE INSANE ASYLUM at Tuscaloosa, with a capacity of 1000, has now about 1500 patients and is refusing applications for admission by the hundred. Dr. J. T. Searcy, the superintendent, has addressed a letter to each member of the legislature, calling attention to the overcrowding of the institution, recalling the fact that the state has the 1600 acres of land and the buildings of Mt. Vernon barracks and reservation donated to it by the United States, and begging the legislature to pass measures to relieve the overcrowding.

COLORADO.

DIPHTHERIA is prevalent in Globeville, and the schools have been closed in consequence. On October 20, there were four deaths and three days later 20 cases had been reported.

Denver.

THE NATIONAL JEWISH HOSPITAL FOR CONSUMPTIVES was incorporated in Denver, October 31, not for pecuniary profit, by Henry Frankle, Sol. L. Holzman and David May.

THE HOSPITAL CORPS of the First Infantry, N. G. Colo., has been reorganized and now contains eighteen enlisted men, officered by Major Carey K. Fleming, M.D., Captain Aubrey H. Williams, M.D., and Lieutenant David D. Thornton.

AFTER JAN. 1, 1901, every school in the city will have assigned to it a medical inspector, provided the city council will authorize the necessary expenditure. The health commissioner, Dr. Thomas J. Carlin, urges that a daily inspection of every school be made.

ILLINOIS.

BLESSING HOSPITAL, Quincy, will have the following staff for the next six months: Dr. Charles D. Center, physician-in-charge; Drs. Leonard L. Gill and Edmund B. Montgomery, consulting physicians; Dr. Robert J. Christie, Jr., surgeon; Drs. Joseph Robbins and Robert J. Christie, consulting surgeons; Dr. Sarah Vasen, obstetrician and gynecologist; Dr. Charles W. Root, consulting obstetrician and gynecologist; Dr. Frank E. Tull, oculist and aurist, and Dr. Frederic M. Pendleton, consulting oculist and aurist.

Chicago.

DR. J. CHARLES STAMM has been sued for $20,000 for injuries alleged to have been received by a woman while under his professional care.

THE CHICAGO COLLEGE FOR NURSES has been founded, with the intention of giving "women training in all duties of skilled nurses without requiring two years of bondage in hospitals and training schools."

DR. W. S. CHRISTOPHER, of the board of education, in view of the excellent results of medical inspection of schools last year, wants the inspection of both public and parochial schools intrusted to the health department.

A MOTION was made on November 8, to quash the indictments against the officials of the Metropolitan Medical College on the ground that the indictments are faulty because the charges do not come within six calendar months.

HEALTH DEPARTMENT.

The mortality of Chicago for the first ten days of this month was 18 per cent. lower than for any previous like period. At this rate the annual death-proportion of Chicago per 1000 would be only 10.56. For the week ended November 10, only 361 deaths was reported, or 79 less than for the corresponding week of 1899. Of the deaths only 5 were from typhoid fever, which compares favorably with 12, the figures of a year ago; 56 were from consumption; 31 from pneumonia; 26 from heart diseases; 23 from acute intestinal diseases; 29 from violence; 9 from diphtheria and 1 from scarlet fever.

INDIANA.

DRS A. G. BRETZ AND R. R. THOMPSON, Indianapolis, now internes of the City Dispensary, have been appointed to the staff of the City Hospital.

THE STATE BOARD OF HEALTH has sent out circulars to all health officers and school officials warning them against expected outbreaks of diphtheria. The disease exists in every county in the state, and the State Board advises systematic inspection of school-children and quarantining of suspected cases.

DUNKIRK PHYSICIANS have organized a Physicians' Protective Union, officered by Dr. J. S. Lytle, president; Dr. W. H. Benson, vice-president, and Dr. Donn P. Murray, secretary and treasurer. The object of the union is to force collections of accounts due physicians and to blacklist the recalcitrant debtors.

IOWA.

DR. H. LANDIS GETZ, Marshalltown, has resigned as chief surgeon of the Iowa Central Railway.

MISS MIRA HIRSHEY, Muscatine, has purchased ground on which to erect a hospital which she will donate to the city when completed.

THE TOTAL COST of the one case of smallpox that occurred last winter in Independence, was $1500, including the cost of the suit brought by Dr. Joseph H. McGready, for $800, due for his services, but which the board of supervisors attempted without success, to cut down.

A DONATION of $50,000 has been offered by A. Slimmer, of Waverly for the erection of a hospital in Fort Dodge, provided that the city shall furnish an equal amount of money as a maintenance fund and that the hospital shall be free to persons of all colors and creeds.

MAINE.

ON NOVEMBER 3, Dr. and Mrs. S. F. Conant, Skowhegan, celebrated their golden wedding.

THE BUILDING at Presque Isle, formerly occupied by St. John's Diocesan School, has been offered by Bishop Codman, to the Northern Aroostook Medical and Surgical Society for a hospital, which is urgently needed for that locality.

THE BIENNIAL REPORT of Dr. Albion G. Young, Augusta, secretary of the State Board of Health, is an unusually valuable document. He discusses tuberculosis in Maine, vaccination and vaccin lymph, and summarizes the reports of the local boards of health of the state.

MARYLAND.

SEVERAL CASES of smallpox have broken out among negroes at Hyattsville, and the State Board of Health is taking active measures to prevent an epidemic.

THE WOMEN of Govanstown, Baltimore County, have organized an improvement association and have brought pressure to bear to induce the County Board of Health to establish systematic collections of garbage and night soil under the supervision of the local medical officer of health.

THE LADIES HOSPITAL CORPS of the B. & O. R. R. at Brunswick, Frederick County, have opened a hospital at that place. Quarters were secured in the bunk-house and fitted up with all modern conveniences. It was rendered necessary by the frequency of accidents in the railroad yards.

Baltimore.

THE CITY WATER DEPARTMENT is exercising a close scrutiny over the streams from which the water-supply is derived, seek-

ing out the cases of typhoid fever and observing the disposition of the excreta from infected houses.

THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE has lately received a bequest of $3500 from the estate of Dr. Charles M. Hitchcock, who graduated at the university in 1835, moved to California, and died in San Francisco about twenty-five years ago.

THERE WERE 190 deaths for the week ended November 10, a death-rate of 18.26 per 1000 per annum. There were 11 deaths from typhoid fever, 30 from tuberculosis, 7 from cancer, and 8 from pneumonia. Of new cases reported there were: Diphtheria, 43; scarlet fever, 12; typhoid fever, 33; measles, 4; whooping-cough and mumps, each 2.

MASSACHUSETTS.

DR. RUPERT W. PARKER, Boston, was knocked down on November 4, his left arm broken and his wrist badly sprained. His assailants numbered four, one of whom he managed to hold and give into custody.

THE HOUSE OF MERCY, Pittsfield, cared for 1147 patients during the fiscal year just closed, and still reported a balance in the treasury. The managers are making great efforts to raise the $50,000 required to build the new hospital, and as they have succeeded hitherto in their endeavors, the new building may be considered a fact on the extreme verge of accomplishment.

THE HEALTH REPORT of the state for October shows a general increase in infectious diseases, and especially in diphtheria. Greater vigilance is urged on school inspectors, and a temporary hospital has just been opened in Cambridge, for contagious diseases. During 1900 there have been in Boston 3715 cases of diphtheria, 1463 of scarlet fever, 586 of typhoid fever, and since May 1, 650 cases of consumption have been reported.

TUFT'S MEDICAL SCHOOL, Boston, has increased its faculty by the appointment of Dr. George W. Kaan as assistant professor of clinical gynecology; Dr. Timothy Leary, as professor of pathology and bacteriology; Dr. E. Channing Stowell, as assistant professor of children's diseases; Dr. Horace D. Arnold, as professor of clinical medicine, and Dr. Herbert W. White, as assistant professor of theory and practice of medicine. The new building for the school will be ready about May 1 next.

MICHIGAN.

THE WOMEN in the medical department of the University of Michigan number 49.

DR. R. JOHNSTON PALMER, Battle Creek, was severely injured in a runaway November 4.

DR. B. D. HARISON, secretary of the State Board of Medical Examiners, will institute legal action to prevent A. G. Reetz, of Muskegon, practicing as a physician without having the necessary qualifications.

MINNESOTA.

DR. HALDOR SNEVE, St. Paul, has been appointed surgeon to the St. Paul Union Stockyards Company.

THE CITY HOSPITAL, Minneapolis, with its 100 patients, nurses and staff, is in quarantine on account of a recrudescence of smallpox.

MISSISSIPPI.

DR. JOHN J. STEVENS, Hattiesburg, has been appointed health officer of Perry County.

A NEW CASE of yellow fever with death was reported from Natchez, November 8. The United States Marine-Hospital surgeon is endeavoring to trace the source of infection.

CANDIDATES for medical licenses to the number of 28 appeared for examination in the House of Representatives, Jackson, on October 10. Six were colored, including one woman.

IN DEFAULT of funds to carry out measures for the limitation of scarlet fever and smallpox in the state, the State Board of Health has formally reported to the governor that these diseases prevail in certain portions of the state.

NEW YORK.

THE MEDICAL BOARD of the Watertown City Hospital has re-elected Dr. James D. Spencer, president, and Dr. Frederick B. Smith, secretary.

THE HEALTH BULLETIN for October, issued by the State Board of Health, shows 10251 deaths, representing 16.5 per 1000 per annum. Of this number 245 died from typhoid fever and 980 from consumption.

GUY E. WHITE, a senior student in Syracuse Medical College, who served in the 202d New York Infantry, U. S. V., and afterward in the hospital corps of the army, died from heart disease, October 23, aged 22.

TYPHOID FEVER is unusually prevalent in Syracuse, and investigation as to its cause is being made by the city health authorities. During October, 24 new cases of the disease were reported and, on November 6, 29 cases were under treatment in hospitals.

CONEY ISLAND is assured that it will have a hospital before the opening of summer. The building on West Eighth street, near Surf avenue, formerly occupied as a police station, will be leased and transformed into a hospital. The district contiguous has a population of about 50,000 and the nearest hospital is five miles away.

Buffalo.

THE CRADLE-BANK receipts for the maintenance fund of the Children's Summer Hospital at Athol Springs amounted to $5444.29 for the season.

AN INTERNATIONAL CONGRESS OF NURSES is expected to be held during the Pan-American Exposition in commemoration of the rise and progress of nursing.

THE BUFFALO GENERAL HOSPITAL will soon build an addition costing $50,000. It will be 38 feet wide and 96 feet long, and will be used for ward purposes.

THE EMERGENCY HOSPITAL at the Exposition grounds, begun about two weeks ago, is now nearly completed. It is a T-shaped structure, with wards for men and women, operating room and an ambulance barn in which four automobile ambulances will be kept ready to answer emergency calls.

OHIO.

DR. MERRILL RICKETTS, Cincinnati, gave a dinner in honor of Dr. Thomas H. Allen, of New York, November 8.

DR. AND MRS. ALEXANDER J. ERWIN, Mansfield, sail for Europe on the *Fürst Bismarck* to-day, and will winter on the Nile and the Mediterranean.

THE CITY HOSPITAL of Cincinnati has elected Dr. John M. Withrow, gynecologist, Dr. John E. Griewe, clinical director, and Dr. David J. Wolfstein, neuropathologist.

DR. ORLANDO B. LONGENECKER, Dayton, has been found guilty of advertising a medicine through the mails for an illegal purpose, and has been sentenced by the United States Court to jail for six months and to pay a fine of $50 and costs.

DURING the 24 hours from November 5 till November 6, 11 cases of diphtheria, 10 of scarlet fever, 3 of smallpox, 1 of typhoid fever and 3 of membranous croup were reported in Cleveland, yet the health officer says he sees "no reason for alarm."

THE ATTORNEY-GENERAL of the state has decided that "any person found guilty of wilfully refusing to comply with any lawful order of the local board of health may be fined not exceeding $100 for the first offense and can not be legally imprisoned, and for subsequent offense of like nature he may be fined and imprisoned for not more than ninety days."

DR. J. C. CULBERTSON, editor of the *Cincinnati Lancet-Clinic*, gave an "evening of authors" at the Hotel Sterling to meet Rev. and Mrs. Henry C. Culbertson, at which the leading literary lights of the Ohio Valley were present, including Dr. Charles Frederick Goss, author of "The Redemption of David Corson"; Dr. John Uri Lloyd, author of "Stringtown on the Pike"; Coates Kinney, author of "Rain on the Roof"; John J. Piatt, Dr. W. H. Venable and some forty others. A unique feature was the dining table set in the form of a hollow square, in the center of which was another table piled with copies of the books written by the guests of the evening.

OREGON.

THE North Pacific Sanatorium has recently been opened in Portland.

DR. L. T. BROCK, Sumpter has been appointed assistant surgeon to the Sumpter Valley Railroad.

THE UNIVERSITY OF OREGON Medical Department began its fourteenth annual session at Portland, October 1. The dean, Dr. Simeon E. Josephi, made the opening address.

THE GOOD SAMARITAN HOSPITAL, Portland, received the entire gate receipts of the street fair for one day. In addition to this amount, $553 has been donated toward the building fund of the hospital.

PENNSYLVANIA.

AN EPIDEMIC of typhoid fever is now prevailing in the town of Cementon, and several deaths have occurred. Up to November 8, 42 cases had been reported.

THE POLICE of Lancaster, a few days ago, found a man suffering from smallpox, and he was at once taken to the county hospital. He recently came from Baltimore.

THE STATE HOSPITAL at Norristown has asked for an appropriation from the state amounting to $85,000, to be used for a new buildings for male consumptives to cost about $5000; two buildings for nurses, $50,000; pathological laboratory, $3000, and a chapel, $10,000.

THE CARBONDALE HOSPITAL has reorganized its staff, which now consists of Dr. Alexander F. Gillis, chief of general surgical staff; Dr. John S. Niles, chief of special surgical staff; Dr. David L. Bailey, chief of medical staff, and Dr. William W. Fletcher, in charge of eye, ear and throat department.

Philadelphia.

FIVE of the ten filters for the public schools have been installed at a cost of $1269. The water from these filters has been tested and approved by the chief inspector of the bureau of health.

DR. LAURENCE TURNBULL left an estate of $79,000.

A BEQUEST was left by the will of Mary Ann McCunney to St. Mary's Hospital, and the amount—$800— has been paid to this charity.

FOR THE WEEK ended November 10, the deaths numbered 369, or 7 less than the previous week. Tuberculosis caused 40 deaths; pneumonia, 37, and bronchitis, 7. Of diphtheria, 153 cases were reported, with 21 deaths.

THE FUNDS accumulated by the relief association maintained by Shoneman Bros., on the retirement of the firm from business, were divided between the Free Hospital for Poor Consumptives and the Children's Country Week Association.

THE MEDICAL INSPECTORS OF SCHOOLS, who have served a year without pay, have organized and will ask the council for an appropriation for the coming year. Failing this, the system of medical inspection in the public schools will be likely to fall to the ground.

RHODE ISLAND.

THE EMERGENCY HOSPITAL at Providence was opened on September 3. The building is being rapidly furnished and equipped.

DR. EDWARD P. STIMSON, Tiverton, has been appointed medical examiner of District No. 1, County of Newport, vice Dr. A. S. MacKnight, Little Compton, resigned.

TYPHOID FEVER is said to be epidemic in Newport. Fifty cases have been reported, the local hospital is full, and endeavors are being made to secure an emergency hospital. Incidentally the board of aldermen has directed that the city water be examined.

THE STATE BOARD OF HEALTH is investigating the case of Dr. Joseph Roy, Harrisville, who is charged with grossly unprofessional conduct in that the diploma presented by him to the board was originally issued to another person; that he has not had a sufficient education to practice medicine with safety, and that he obtained his certificate to practice by misrepresentation.

TENNESSEE.

THE MEMPHIS HOSPITAL MEDICAL COLLEGE opened for its twenty-first annual session November 1.

THE QUARANTINE over Maury County was suspended November 4 on account of improved smallpox conditions there.

DR. CHARLES S. BUTLER, Bristol, has successfully passed the examination and has been commissioned as assistant-surgeon in the United States navy with the rank of lieutenant.

DR. WILLIAM D. HAGGARD, JR., Nashville, has been elected to fill the chair of gynecology and diseases of children in the medical department of the University of Tennessee, formerly occupied by his father for many years.

THE SUPREME COURT of Tennessee has decided, in the case of Dr. Henry P. Colle, who sued the city of Knoxville for $4000 extra compensation for attending smallpox cases during an epidemic, that he could not recover in the absence of a specific contract.

TEXAS.

THE MEDICAL UNIVERSITY OF DALLAS held its opening ceremonies October 30 and installed its faculty.

THE MEDICAL COLLEGE of the State University, Galveston, reopened on November 15, and will continue its session until June 29.

"DR." L. W. JONES, Cleburne, was arrested at Buel October 27, charged with the forgery of a doctor's certificate. He was released on bond.

STATE HEALTH OFFICER DR. WALTER F. BLUNT, Austin, has visited Smithville and Hondo to investigate the smallpox situation in those places.

VIRGINIA.

DR. WILLIAM M. SMITH, Alexandria, was elected major and surgeon of the 17th Virginia regiment, on October 10.

DR. JOHN G. TREVILIAN, in charge of the Richmond City Almshouse and Hospital, has asked the city council for a third ambulance physician.

THE WILL of Dr. Hunter McGuire was probated September 30. The estate is valued at $150,000 and is devised to his wife, and his library and instruments are to be divided equally between his sons, Drs. Stuart and Hugh McGuire.

THE VIRGINIA HOSPITAL, Richmond, between October, 1899, and July, 1900, cared for 399 patients, and the dispensary treated 5516 patients. The hospital was closed from July 20 to October 1, when it was opened for charity cases, and private patients were admitted November 1.

GENERAL.

BILLS OF HEALTH to vessels engaged in foreign trade will hereafter be issued at Manila by the officials of the United States Marine-Hospital Service.

THE ASHES of eighteen cremated plague victims, each in its own sealed receptacle, are reposing in the offices of the Honolulu board of health, awaiting instructions from the friends of the deceased.

THE REPORT comes from Cape Nome, in October, of the nine hospitals open at the end of July, one only was in operation. This hospital is about to close, as it has not enough patients to warrant its continuance.

DR. FRANCISCO DEL VALLE, formerly mayor of San Juan, Porto Rico, is the first Porto Rican to vote without going through the formality of naturalization. He was "naturalized by annexation," and voted at the recent election at Baltimore.

DR. MANUEL S. YGLESIAS, health officer of Vera Cruz, Mexico, has been visiting Philadelphia, and recently paid a visit to the quarantine station at Marcus Hook. He was chosen a delegate from Mexico to the American Public Health Association at Indianapolis, and since that time has been making a study of the quarantine stations in various parts of the country.

SMALLPOX has broken out at several of the Indian reservations in the West. Reports show that the disease has appeared and is epidemic on the Wichita, Apache, Kiowa and Comanche, and Cœur d' Alene reservations, and that it is increasing at Fort Hall Agency, Blackfoot and Pocatello, Idaho, and at Valentine, Neb., shipping point for the Rosebud Agency.

PROFESSOR TILMANN, of Griefswald, Germany, professor of surgery at that place, and well known to the profession of this country by reason of his contributions to surgical literature, the latest of which is his experimental research on the results of wounds from the modern small-caliber, steel-jacketed bullet, forming a part of Professor Von Coler's work on that subject, has recently visited Chicago in the course of a vacation trip through North America.

MAIL FROM MOLOKAI, the leper settlement of Hawaii, is disinfected with sulphur dioxid at the settlement, transferred to the steamer and received in clean and disinfected sacks. On its arrival in Honolulu, the mail in sacks is disinfected with formaldehyde. All letters are perforated and the corners clipped before disinfection. Although non-disinfected mail from Molokai has been handled for many years, no case of leprosy has ever been discovered among post-office employees.

PROF. WILLIAM W. KEEN, Philadelphia, was entertained November 2, by his old students of Jefferson Medical College resident in and near Indianapolis, and in the evening was tendered a banquet at the Bates' House, in which 60 participated. Dr. Thomas C. Hood officiated at toastmaster. Dr. Alembert W. Brayton made the address of welcome; Dr. G. W. McCaskey spoke on behalf of the medical profession of Indiana; Dr. Frank C. Ferguson, for the Marion County Medical Society, and Dr. Frank B. Wynn contended that "Indiana is no mean State."

PAN-AMERICAN MEDICAL CONGRESS.—This congress will be held at Havana, Cuba, Dec. 26-29. Dr. Henry P. Newman, 100 Washington street, Chicago, American secretary of the Section on Abdominal Surgery and Gynecology, desires to hear at once from those who wish to take part in the scientific work of his section. Also he would be glad to hear from any from the West who are thinking of attending the congress, as arrangements are being made for low railroad rates from Chicago. Dr. Charles H. Hughes, of St. Louis, Mo., who has been appointed Secretary of the Section on Nervous and Mental Diseases, requests alienists and neurologists especially, and all medical men who appreciate the importance of, and who desire to advance, neurology and psychiatry in clinical and legal medicine, to ally themselves with this section and to prepare contributions on proper subjects. He requests that titles and summaries of papers be sent to him at once at 3857 Olive Street, St. Louis, Mo.

DR. FREDERICK PETERSON, president of the board of managers of the Craig Colony for Epileptics, at Sonyea, N. Y., offers a prize of $200 for the best original unpublished contribution to the pathology and treatment of epilepsy. All manuscripts should be submitted in English. The prize

is open to universal competition. Each essay must be accompanied by a sealed envelope, containing the name and address of the author and bearing on the outside a motto or device, which is to be inscribed also on the essay. All papers received will be submitted to a committee of three members of the New York Neurological Society, and the award will be made on its recommendation, on October 8, 1901. Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th street, New York City, on or before Sept. 30, 1901.

A NEW EMERGENCY RATION.—Officers of the War Department are endeavoring to determine the value of a new emergency ration, fitted to meet the requirements of troops in the field. The test is being made upon 25 men of Troop A, Eighth U. S. Cavalry, stationed at Fort Reno, Okla. Two different emergency rations are being experimented with. The first consists of two cakes of pure chocolate, three cakes of a combination of meat and breadstuff, in compressed form, with salt and pepper. The second consists of tea instead of chocolate, and a combination of meat and breadstuff in a compact form. The experiment will begin by having the expedition to leave Fort Reno under hurried orders. Five regular, and emergency rations will be issued at the start. The men will live for two days on the regular ration and then will subsist for five days on the new ration. The temperature and weight of each man will be taken twice daily. The investigation is being made by a board consisting of Capt. S. W. Fountain, Eighth Cavalry, S. W. Foster, Fifth Cavalry, and Capt. and Asst.-Surg. J. D. Poindexter, of the medical department of the army.

CANADA.

POLITICS AND THE PROFESSION.

A notable feature of the recent general elections was the personal defeat of Sir Charles Tupper and his subsequent retirement from the leadership of the Conservative party in the Dominion. Sir Charles was at one time a prominent and successful practitioner in the County of Cumberland, N. S., but forsook medicine for politics at the age of 34. He is a graduate of the Royal College of Surgeons, Edinburgh, was instrumental in founding the Canadian Medical Association, and was thrice elected to its presidency. Dr. Roddick was a candidate for political honors in the City of Montreal, and it is very gratifying to the medical profession that he has again secured the confidence of his constituents.

THIRD ANNUAL REPORT—NATIONAL SANITARIUM ASSOCIATION.

The annual meeting of the National Sanitarium Association was held in Toronto on the afternoon of the third inst., Chief Justice Sir William Meredith, president, in the chair. The third annual report was presented, which showed that the work in the Muskoka Cottage Sanitarium was of the most gratifying character. This institution was opened only three years ago, and already 371 patients have been received, of whom 47 are still under treatment. The number discharged apparently cured has been 57; with disease arrested, 95; with marked improvement, 78. In most cases, the patients have not remained long enough to reap the benefits of the institution, but the average stay has increased each year, and this year amounted to 129 days. On Oct. 1, 1899, the beginning of the hospital year, 48 patients were present, and during the year, 141 more have been admitted, making a total on the books of 189. Of these 43 were from the City of Toronto, 130 from other points of Ontario, 4 from other provinces of Canada and 12 from the United States. Out of the total, 122 patients remained in the institution over three months, and of these 109 gained in weight, 6 lost in weight, and 7 neither gained nor lost. Theh total receipts for the year were $19,020. The expenditure amounted to over $20,000; $3148 was expended in butcher's meat and $1263 in milk. A letter was read from the medical superintendent, Dr. J. H. Elliott, at Nordrach, who has been spending a year in Europe studying the methods pursued there.

LAY PRESS DEFENDS PATENT MEDICINES.

A measure has been introduced into the Ontario legislature at its last session in regard to regulating the manufacture and sale of patent remedies, as well as limiting also their advertisement in the press of the province. Considerable opposition to the measure is arising amongst the manufacturers and the retail druggists, probably more particularly now amongst the latter, as the requirements of the bill are such, that if they wish to prepare and sell a preparation of their own, they will have to pay into the treasury of the province $1000, to license them to manufacture any article which they might wish to expose for sale in their shop windows; and if they desired to sell different receipts or "non-secrets," they would be required to put up $10,000. It has been pointed out on behalf of the druggists—and a very ingenious point it is—that the newspapers of Ontario would stand to suffer to a greater extent than the retail druggists, as a very large percentage of the revenue of the press comes from the advertisement of "trademark" articles; and of course the newspaper owners are up in arms against the proposed legislation and are hand and foot with the patent-medicine vendors, with the single exception of one society journal, which has given its contemporaries of the press some pretty severe raps on their advertisements and their opposition to this bill. Commenting further on the relation of the manufacturers of patents, the press and the public, this writer goes so far as to say: "In the interests of the patent-medicine houses the newspapers should not entirely forget the interests of the public, nor for the sake of temporary profit impair their permanent interests." It is certainly refreshing to see at least one paper in Ontario taking such a firm stand for the good of the community; and while all the provisions of the bill may not be considered perfect, it contains elements which ought to count as its essential principles, and which ought to commend it to right-thinking legislators.

FOREIGN.

YELLOW FEVER is declared to be epidemic at Leone, Nicaragua.

DR. CAVALLI, who accompanied the Duke di Abruzzi on his arctic trip, has been made a Commander of the Order of the Italian Crown.

MR. WILLIAM ANDERSON, surgeon to St. Thomas' Hospital, London, and professor of anatomy at the Royal Academy, died October 27.

DR. POZZI, in a recent lecture in Paris, paid a glowing tribute to American surgeons, whom he characterized as "scientifically audacious and brilliantly cool."

THE ASSOCIATION of Physicians of the Seine recently offered a banquet to its president, Dr. R. Jamin, on the occasion of his decoration with the button of the Legion of Honor.

THE *Lancet* announces the dedication of a new and permanent building for the Free Home for the Dying. The building is said to be well adapted for its purpose, containing 25 beds, 12 in the woman's ward, 8 in the men's and the rest in single rooms.

SINCE THE DEATH of the plague-stricken sailor from the steamer *Marienburg* at Bremen, several new cases of the disease have been discovered. The outbreak is causing a panic on a small scale, and is affecting seriously the shipping interests of the port.

EIGHT SEAMEN suffering with beri-beri, and the body of one who had died of the disease, were landed at Falmouth, Eng., October 17, from the Norwegian bark *Brilliant*, from Newcastle, N. B., for Grimsby. All had been taken off the waterlogged Norwegian bark *Homewood*, which sailed from Ship Island for Havre, August 3.

AT THE last meeting of the British Medical Association, a Committee on Reorganization of the British Medical Association was appointed. This committee, of which Mr. Edmund Owen is chairman, is now holding meetings in order that it may have its report ready to present to the branches by Feb. 1, 1901. We understand that the committee is instructed to consider the advisability of adopting the delegate system. This would be a reform in the right direction, and, if adopted, will likely result in taking away from the council a large part of the power as a legislative body which it enjoys at present.

THE VITAL statistics of New South Wales in 1899, as given in the *British Medical Journal*, show a decreasing birth-rate and a slightly decreasing death-rate. The number of children to a family have dropped from 5.26 to 4.34, and the birth-rate is only 27.10 to the 1000 of population, the lowest recorded. The mean annual increase of population by excess of births over deaths is 1.67 per cent. for 1890 to 1899, as against 2.30 in the period of 1880-84. Illegitimate births are increasing, amounting to 7.16 per cent. of the total, and having increased from 4.09 per cent. to 6.84 per 1000 in 1896-99. Phthisis showed a decrease from 14 per cent. in 1889 to 11 per cent. in 1899, while cancer is on the increase.

Treatment of Dysentery with Methylene Blue.—Berthier administers methylene blue in dysentery in two to four injections of 1 to 2 cg. in a liter of warm water. It rapidly arrests the pains, and diminishes the number of the stools, by its parasiticidal, analgesic and cholagogue action. It is also a mild disinfectant and powerful antitoxin. The patient reclines and retains as much of the injection as possible. The bile reappears in the feces by the second day at latest.—*Int. Med. Congress.*

Correspondence.

Medical Study in Helsingfors, Finland.

VIENNA, Oct. 25, 1900.

To the Editor—The University at Helsingfors is very well equipped, having over 2000 students, and a teaching staff of about 100 professors and docents; a fair proportion of the students belong to the medical faculty, which is justly celebrated throughout Europe.

In the medical clinic I saw some excellent work carried on by Professor Rüneberg, son of the national poet of Finland, and his assistant, T. W. Tallquist. As is well known, these investigators have made admirable studies of the different anemias, especially of that form of secondary anemia which is due to the presence of the bothriocephalus latus. I saw many of the latter class of cases in the University Hospital, as well as several cases of pernicious anemia, a malady very similar in its clinical history. It is a matter of routine in that clinic to examine microscopically the feces of every patient suffering from any form of anemia, in the hope of finding the eggs of the above parasite. The detection of these eggs is marvelously easy; a very large number of these cases yearly is at the disposal of this clinic. The Helsingfors observers have quite definitely proved by experiments on dogs the manner of action of this parasite. Formerly it was supposed that the worm produced anemia either by its effect on the nervous system, or by the actual absorption of fluid; the real mode, however, is by the generation of some poison which enters the general circulation, and produces destruction of the red corpuscles. Clinically, these patients, besides suffering from a profound anemia, are distinguished by a deep icterus of the conjunctivæ and a dark color of the urine. A curious fact in connection with patients carrying this worm, is that only a very small percentage, hardly 1 per cent., develop a condition of anemia.

An examination of the blood shows regularly a diminution of the leucocytes; the ratio of multinuclear white corpuscles to the uninuclear varies greatly; in this regard this form of anemia varies from the pernicious variety, which shows only an abnormal increase of the uninuclears. Often the number of the red corpuscles in a cubic millimeter sinks down to 500,000; in spite of this great oligocythemia most of these cases recover after the expulsion of the worm. In most of the cases are found nuclear red corpuscles, some of which are normoblasts, but a few are megaloblasts.

Tallquist has constructed a handy method of determining the percentage of hemoglobin; it is by means of comparing a drop of blood sucked up by white filtering paper and comparing it with a colored scale; the filtering paper and the colored scale are bound together in a book, making a clinical determination of hemoglobin a very easy matter.

The surgical clinic at Helsingfors, whose head was formerly the lamented Esflander, during the year 1898, had 1358 in-patients and 9804 out-patients. Their methods were the ordinary ones in use in well-appointed hospitals, and need not be given in extenso.

Among the hard-working peasants of Finland hernias are very common and a very large number of them have been radically treated at this clinic; a careful investigation as to the final result of the different operations for rupture is now being conducted by the surgical staff. This is not yet completed, but through the kindness of Dr. E. Sandelin, I was able to get some preliminary figures. For inguinal hernia the years 1889 till 1898 inclusive there were performed 1039 radical operations, mostly by Bassini's method. Of these cases 5 died; of crural hernia in these years there were 51 operations with one death. For umbilical hernia there were 19 operations with no death, and for hernia in the linea alba there were 31 operations with no death. Relapses after operations for external inguinal hernia took place in about 7 per cent., for internal inguinal hernia in about 12 per cent.. in all cases.

It was my privilege to spend two days at the gynecological clinic of Professor Otto Engström, and to witness that skilled operator perform several difficult operations. Professor Engström's new clinic has only 26 beds; in connection with these is a polyclinic where 1600 to 1700 patients are yearly treated; from Jan. 1, 1900, till Sept. 8, 1900, there were 1472. Moreover, to these should be added the patients belonging to his very large private practice, many of whom go to his clinic for operation. For example during 1899 he performed 56 ovariotomies, 37 ovariotomies with removal of the tubes, 6 ventrofixations for ordinary prolapse, 90 ventrofixations for retroflection, 23 cauterizations of the ovaries, and so forth. Engström as an operator is very conservative; that is to say, wherever it is possible he endeavors to save an important organ. Uterine myomata he always strives to enucleate. At the congress of gynecologists in Amsterdam, September, 1899, he reported 180 cases of enucleation of intramural myomata of the uterus by the abdominal route with a mortality of hardly 3 per cent. Of these women 9 have since become pregnant. This is certainly not a small result, for more than half of those operated on were unmarried, and among those who were married, were many over 40 years of age, and others suffering from the effects of old inflammations in the pelvis. Since September, 1899, he has had many more cases of enucleation, and many more of his patients have become pregnant. Even in cases of total prolapse of the uterus, he never does an extirpation unless the patient is in, or has passed, the climacteric, or there is reason to suspect cancer. In bad cases of prolapse, as plastic operations on the vagina, and of uteri rarely suffice, Engström makes regularly a ventrofixation of the body of the uterus by a sort of peritoneal suture, to wit: the serosa of the fundus is scraped off, the peritoneum is shoved somewhat to one side, the fundus is then united with strong catgut sutures to the freshened recti muscles just over the symphysis. In this way he gains a very firm union.

So far as the ovaries are concerned, Engström is very careful. In cases of supravaginal amputation on account of myomata as well as extirpation of the uterus for cancer, or prolapse, or in cases of removal of the tubes, he makes the attempt to save them. If the whole ovary can not be saved, he yet tries to preserve a bit of the normal ovarian tissue.

It is surprising how little importance Engström attaches to certain conditions that other gynecologists make much of. According to his experience a retroflected uterus per se is very rarely the cause of the symptoms of disease. The latter are almost invariably occasioned by inflammatory processes, communicated to the uterus or tubes. This view Engström advanced at the Amsterdam Congress, as well as on other occasions. It is needless to say that he rarely uses pessaries. In those retroflexions that are bound down with adhesions he always proceeds in the following manner: After thoroughly breaking up the adhesions the anterior part of the fundus is united by its serous surface to the serous surface of the abdominal wound; a strong silk suture is then passed through all the layers of the abdomen and through the uterus; this suture remains two weeks.

The peasantry and neighboring classes of Finland frequently are found to have floating kidneys; in the year 1899 in Engström's clinic 600 cases were diagnosed; of these only 2 were treated by nephrorrhaphy. Engström usually examines these patients in the upright position, and is heretic enough to believe that this condition per se does not give rise, as a rule, to serious symptoms.

In all the above-mentioned operations the strictest antiseptic precautions are invariably observed, even to the bathing of the patient, operator, and assistants just before the operation. In all plastic operations about the vulva, as a preliminary procedure, the anus is sewn up by a puckering string suture, which naturally is removed directly after the operation. The scientific results of Engström's work are of a very high order, and are published at intervals in the German language, although his teaching is naturally given in the Swedish tongue. Many of the studies are from his own pen, but a large proportion is the work of his pupils. The scientific activity of his school is shown by the fact that a volume appears every three months. The last number, xxxi, is entitled: "Ueber Schwanghaft in unvollkommen entwickeltem Horne eines Uterus bicornis unicollis."

ALLEN STAPLES, M.D.

The Individual Communion Cup.

PHILADELPHIA, Nov. 9, 1900.

To the Editor:—In THE JOURNAL for November 3, a brief reference is made (p. 1150) to a "Sanitary Substitute for the Individual Communion Cup," which the *Lancet* suggests, namely, "intinction," or "the ancient custom of dipping the bread in the wine." With regard to the ecclesiastical or sanitary reasons for the revival of this method of celebrating the Lord's supper I have nothing to say here, pro or con. But the reason for advocating the change that the *Lancet* gives, namely, that individual communion cups are not practicable, is valid or not, according to the point of view; that is, whether from the dogmatic and ecclesiastical, or from the purely sanitary.

If the *Lancet* means that according to the doctrine and ritual of the Church of England (presumably, because the state church), individual communion cups are impracticable, then I have nothing to say; the advocates of this sanitary reform do not urge any body of the Christian church to relinquish any beliefs that it considers vital and dear to its spiritual serenity and moral conduct, and holding which, it believes would be jeopardized by substituting individual for commonly-used communion cups. But if the *Lancet* means that individual communion cups are not practicable from a sanitary standpoint, then it is either ignorantly or wilfully, certainly wofully, mistaken. Of course, there are very few churches in England that use individual communion cups; and these are "dissenting" churches. Perhaps the *Lancet* thinks that sanitary progress among dissenters is unknowable, or unworthy of notice. Yet, surely that great journal can hardly be so stupidly agnostic of American literature on the subject, not to know that in these United States there are hundred of churches and hundreds of thousands of communicants demonstrating that individual cups are not only practicable, but practical; clean, safe, convenient, satisfactory.

The "dissenters" here outnumber the sister denomination of the Church of England by so many millions that the *Lancet* could hardly have failed to know, even with a manifest sectarian bias, that sanitary advancement in this matter is ahead here, even if the editor of that journal believes that in England the state church ought to live up to its traditions as a sanitary leader, and adopt intinction instead of having many mouths of questionable cleanness and health using a single chalice. Sincerely yours, HOWARD S. ANDERS, M.D.

Marriages.

THOMAS J. TALBOTT, M.D., to Miss Bessie Olivia Fisher, both of Baltimore, October 31.

JAMES L. PHILLIPS, M.D., New York City, to Miss Marion Ewing Hamilton, Baltimore, Md., October 30.

LOUIS H. BIRMINGHAM, M.D., Boston, to Miss Jennie R. Marsh, at Sutton, Mass., November 1.

MARTIN L. DALTON, M.D., Willis, Va., to Miss Lula M. Lester, Floyd, Va., October 30.

JOHN W. COFFIN, M.D., Beaver Falls, Pa., to Miss Gertrude M. Jolly at Coraopolis, Pa., October 31.

S. WHITFIELD HARTT, M.D., Port Angeles, Wash., to Miss Bertha Dayton, Lisbon, O. October 31.

W. KEELING WOOD, M.D., Centreville, Va., to Miss Elda Belle Vanderlip, of Indian Lake, Mich.

O. WELLINGTON ARCHIBALD, M.D., St. Paul, Minn., to Miss Emily Kennedy, of Jamestown, N. D., at St. Paul, Minn., October 30.

PAUL WILLIAMSON HOWLE, M.D., Mt. Carbon, W. Va., to Miss Adeline Green, Richmond, Va., November 1.

ALBERT F. MILLER, M.D., Auburn, N. Y., to Miss Alice L. Lovell, of Syracuse, N. Y., November 1.

Deaths and Obituaries.

JOHN BERRYMAN, M.D., Edinburgh, 1861, at St. John, N. B., November 4, aged 72. After a trip to Australia he studied in Edinburgh, and was assistant to, and lived with, Sir James Y. Simpson. On the outbreak of the Civil War he was put in charge of a hospital in West Philadelphia. Soon after the close of the war he moved to New Brunswick and settled in St. John. In 1886 he was returned to the House of Assembly from St. John.

AUGUSTUS D. MERROW, M.D., Bowdoin College, 1854, for thirty-three years a practitioner at Freedom, N. H., twice state representative and twice state senator, at his home, October 16, aged 73.

STANLEY MAC C. STUART, M.D., first lieutenant and assistant surgeon, assigned to 11th Cavalry, U. S. V., at Santa Cruz, Luzon, November 6, from fracture of the skull, caused by a fall from his horse.

REMUS ROBINSON, M.D., College of Physicians and Surgeons, Baltimore, 1881, from paralysis after several years, at his residence in North Windham, October 29.

M. LAFAYETTE, GORDON, M.D., College of Physicians and Surgeons, for twenty-eight years a missionary in Japan, at Auburndale, Mass., November 4, aged 57.

CLINTON W. SIEGER, M.D., University of Pennsylvania, 1875, from dropsy, after an illness of several years, at his home, Siegfrieds, Pa., October 27, aged 47.

WILLIAM A. CLAPP, M.D., Jefferson Medical College, 1847, who had practiced medicine more than half a century in New Albany, Ind., November 7, aged 78.

GEORGE M. DEWEY, M.D., Jefferson Medical College, 1883, at Keytesville, Mo., where he had resided for fifty-four years, November 5, aged 81.

JOSHUA N. SPEED, M.D., College of Physicians and Surgeons, Keokuk, Ia., 1860, the oldest practitioner in Rushville, Ill., November 6, aged 66.

EDWARD V. NEWTON, M.D., New York University, 1875, coroner of Norfolk, Va., at that place, November 3, after a lingering illness.

STANHOPE C. SMITH, M.D., Tulane University, 1850, was found dead in his house, Lacey's Springs, Ala., October 30, aged 80.

C. W. RILEY, M.D., Fort Wayne College of Medicine, 1896, from concussion of the brain, in a runaway accident, November 1.

VINCENT SULLIVAN, M.R.C.S., England, of Kingston, Ontario, at Las Vegas, N. M., November 4, from tuberculosis, aged 32.

A. T. ROBINSON, M.D., Albany Medical College, 1895, from apoplexy, at his home, Mansfield, Mass., November 4, aged 34.

THOMAS WHEELER, M.D., Medical College of Evansville, Ind., 1854, at Bloomfield, Ind., October 31, aged 79.

HIRAM GREENTREE, M.D., University of Maryland, 1855, from dysentery in Baltimore, October 28, aged 78.

JAMES P. CLEAVER, M.D., University of Pennsylvania, 1894, at Lakewood, N. J., November 8, of tuberculosis.

CHARLES NORMAN HAMPER, M.D., Edinburgh, at Meeker, Colo. October 29, of heart disease, aged 32.

JAMES H. LOWE, M.D., Tulane University, 1858, at his home, Knight's Ferry, Cal., October 16, aged 64.

T. E. STAPLES, M.D., Missouri Medical College, 1848, at his home, Nelson, Mo., October 27, aged 70.

LEVIN W. MAGRUDER, M.D., Tulane University, 1867, at his home, Woodville, Miss., October 30.

FRANK H. WILY, M.D., Jefferson Medical College, 1887, at Centreport, Pa., aged 37.

New Instruments.

Grooved Director for Vaginal Hysterectomy. Uterine Elevating Forceps.*

E. D. FERGUSON, M.D.
TROY, N.Y.

Though simplicity and fewness of instruments in operative work is the pride of many surgeons, there can be no question concerning the help that most operators find in special devices to meet special indications. The two instruments which I

* Read at the Meeting of the New York County Medical Association, October 15, 1900.

present have been tested in actual work and have been found helpful.

The first which I show is a director intended to be passed behind the broad ligament in vaginal hysterectomy, thereby bringing at once into the operative field, and in full view of the operator, the lateral tissues to be incised.

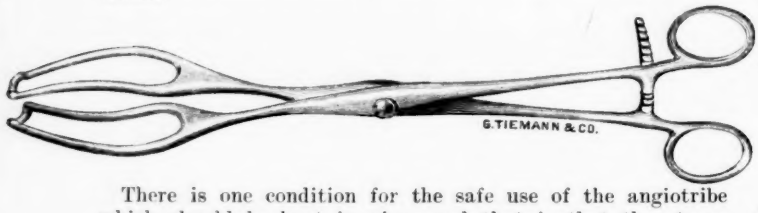
Having opened freely into the pouch of Douglas and having freed the bladder from the uterus, the left index finger of the operator is passed behind the broad ligament and made to appear above that structure at the side of the uterus, the peritoneum having been incised previously at the corresponding vesical fold, or the opening being made on the end of the finger which shows above the broad ligament.

Having made sure that no tissue aside from that belonging to the broad ligament is included by the finger and having sufficiently separated the parts, the director is passed along the palmar surface of the finger until its tip appears well below the broad ligament, when the finger can be withdrawn. The instrument is curved so as to allow of its use when the broad ligament will not permit free descent of the uterus, though in most cases in actual use the director can be advanced until the broad ligament lies on the convex portion.

Having thus brought the broad ligament well into view, the groove in the director enables the operator to ligate securely in sections the uterine connections on the selected side,

that side being the one more readily secured by the finger. The method of ligation will be that in which the operator is most facile, the writer preferring the cobbler's stitch made with a strong kangaroo tendon. The separation of the uterus can go hand in hand with the ligation, which when completed allows the uterus, now freed on one side, to be turned out of the vagina, thus affording opportunity for the ligation of the opposite broad ligament and excision of the uterus. Of course, it is understood that at the lower portion of each broad ligament care is taken to avoid the ureter, but it seems to the writer that if the director emerges close to the uterus at its cervical portion, and the sewing is done along the line of the groove, the ureter will necessarily lie to the outside and remain unharmed.

The reintroduction of forcible and moderately protracted compression as a means to control hemorrhage, notably in the use of the angiotribe, would seem to lessen materially the occasion for the device which I present, and the convenience and even utility of the angiotribe is freely conceded by the writer.



There is one condition for the safe use of the angiotribe which should be kept in view, and that is that the stump should have no rude handling after the incision, otherwise the vessels may be re-opened. Should we be unable to include all the parts we wish to excise in the grasp of the angiotribe, the traction and manipulation necessary to bring other and higher parts into view may result in embarrassing or even serious hemorrhage. At present it is believed that most operators will feel a sense of security in interrupted but locked suturing of the broad ligament, and in particular where the condition of the organs is such as to render it desirable to attack the ovaries after the removal of the uterus.

The other instrument is intended to aid in bringing the uterus into the operation field in ventral suspension of the uterus.

It is only occasionally that the operator will feel the urgent need of such a device, though in many cases he will find it a convenience.

In cases where the uterus is somewhat rigid in its retroflexed form, and the pelvic tissues do not allow it to remain forward with slight support, this device will be found a convenience. If added to these obstacles to easy operating, we have to deal with a thick layer of abdominal fat in a patient subject to ether retching, the difficulties of the operation become great without some device like the uterine elevating forceps.

The method of application is simple, one blade being applied behind the uterus on the palmar surface of the requisite number of fingers, the other blade being placed in front of the uterus, when on locking and compressing the uterus, that organ is completely under the control of the operator, who proceeds to place the anterior stitch, passing it through the fundus of the uterus between the blades of the forceps. As soon as this stitch is made to include both lateral walls and the uterus, the forceps can be removed, as the uterus is now under control.

It is possible that the shape of the blades would have been modified if the author could have been at the side of the instrument- maker, for the shape is not entirely satisfactory to him, though Tiemann & Co. have done exceedingly well from the rather poor drawings which were furnished. In actual work, however, the instrument has never failed to fill all requirements and that without any detectable abrasion on the uterus.

Epiglottis Retractor.

SETH SCOTT BISHOP, M.D.
CHICAGO.

The accompanying figure illustrates an epiglottis retractor designed for use in cases in which it is impossible to obtain a good view of the interior of the larynx without holding the epiglottis upward and forward. The spade-like blade which rests on the posterior or under surface of the epiglottis is sufficiently wide to produce a certain degree of a flattening

BISHOP'S EPIGLOTTIS RETRACTOR.

effect on an omega-shaped epiglottis, thus facilitating laryngoscopy in two ways. A firm control over the retractor is given by the employment of the double-ring handle, such as is used in the biting forceps.

Books and Pamphlets.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

BOOKS.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. A New and Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the Kindred Branches with their Pronunciation, Derivation, and Definition, Including Much Collateral Information of an Encyclopedic Character. By W. A. Newman Dorland, A.M., M.D., Assistant Obstetrician in the University of Pennsylvania Hospital. Together with New and Elaborate Tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Diplococci, Micrococci, Streptococci, Ptomains and Leukomains, Weights and Measures; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc. With Numerous Illustrations and 24 Colored Plates. Leather. Pp. 770. Price, $4.50. Plain, $5.00. Index. Philadelphia and London: W. B. Saunders & Co. 1900.

PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M.D., F.R.C.P., Physician and Special Lecturer on Clinical Medicine at Charing Cross Hospital. Revised and Enlarged by H. Montague Murray, M.D., F.R.C.P., Physician to Out-Patients, and Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital. Ninth American Revised from the Ninth English Edition by Walton Martin, Ph.D., M.D., Assistant Demonstrator of Anatomy,

College of Physicians and Surgeons, Columbia University. With 4 Colored Plates and 339 Illustrations. Cloth. Pp. 585. Price, $3.25. Philadelphia and New York: Lea Bros. & Co. 1900.

SAUNDERS' POCKET FORMULARY. With an Appendix Containing Posological Table; Formulæ and Doses for Hypodermic Medication; Poisons and their Antidotes; Diameters of the Female Pelvis and Fetal Head; Obstetrical Table; Diet List for Nervous Diseases; Materials and Drugs Used in Antiseptic Surgery; Treatment of Asphyxia from Drowning; Surgical Remembrancer; Tables of Incompatabilities; Eruptive Fevers; Weights and Measures, etc. By William M. Powell, M.D., Author of "Essentials of Diseases of Children." Sixth Edition. Thoroughly Revised. Leather. Pp. 297. Price, $2.00. Philadelphia: W. B. Saunders & Co. 1900.

EYE, EAR, NOSE AND THROAT. A Manual for Students and Practitioners. By William Lincoln Ballenger, M.D., Assistant Professor of Otology, Rhinology and Laryngology in the College of Medicine of the University of Illinois, and A. G. Wippern, M. D., Professor of Ophthalmology and Otology, Chicago Eye, Ear, Nose and Throat College. Series edited by Bern B. Gailoudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York. Illustrated with 150 Engravings and 6 Colored Plates. Cloth. Pp. 511. Price, $2.50. Philadelphia and New York: Lea Brothers & Co.

LABORATORY DIRECTIONS FOR BEGINNERS IN BACTERIOLOGY. An Introduction to Practical Bacteriology for Students and Practitioners of Comparative and of Human Medicine. By Veranus A. Moore, B.S., M.D., Professor of Comparative Pathology and Bacteriology, New York State Veterinary College. Second Edition, Enlarged and Revised. Cloth. Pp. 143. Price, $1.05. Boston: Ginn & Co. 1900.

A PRACTICAL TREATISE ON GENITO-URINARY AND VENEREAL DISEASES AND SYPHILIS. By Robert W. Taylor, A.M., M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York. Second Edition, Thoroughly Revised. With 138 Illustrations and 27 Plates in Colors and Monotone. Cloth. Pp. 722. Price, $5.00. New York and Philadelphia: Lea Brothers & Co. 1900.

THE THEORY AND PRACTICE OF HYGIENE. (Notter and Firth.) By J. Lane Notter, M.A., M.D., (Dub.), Fellow of the Chemical Society, and W. H. Horrocks, M.D., B. Sc. (Lond.), Assistant Examiner in Hygiene, Science and Art Department; Assistant Professor of Hygiene in the Army Medical School, Netley. Second Edition. Cloth. Pp. 1085. Price, $7.00. Philadelphia: P. Blakiston's Son & Co. 1900.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M.D., New York City. Volume I. Illustrated by Numerous Chromolithographs and 498 fine Half-Tone and Wood Engravings. Cloth. Pp. 799. Price, $7.00. New York: Wm. Wood & Co. 1900.

MODERN MEDICINE. By Julius L. Salinger, M.D., Demonstrator of Clinical Medicine, Jefferson Medical College, and Frederick J. Kalteyer, M.D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College. Illustrated. Cloth. Pp. 801. Price, $4.00 net. Philadelphia and London: W. B. Saunders & Co. 1900.

MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers Da Costa, M.D., Professor of Principles of Surgery and of Clinical Surgery, Jefferson Medical College. With 493 Illustrations. Third Edition, Revised and Enlarged. Cloth. Pp. 1117. Price, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1900.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By Lewis A. Stimson, B.A., M.D., LL.D., (Yalen.), Professor of Surgery in Cornell University Medical College, New York. Third Edition Revised and Enlarged. With 336 Illustrations and 32 Plates in Monotint. Cloth. Pp. 842. Price, $5.00. New York and Philadelphia: Lea Bros. & Co. 1900.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of Practice of Medicine and Clinical Medicine in the Medico-Chirurgical College, Philadelphia. Illustrated. Fourth Edition, Thoroughly Revised. Cloth. Pp. 1292 Price, $5.50 net. Philadelphia and London: W. B. Saunders & Co. 1900.

SAUNDERS' QUESTION COMPENDS—"ESSENTIALS OF HISTOLOGY." By Louis Leroy, B.S., M.D., Professor of Histology and Pathology in Vanderbilt University. Arranged with Questions Following Each Chapter. 72 Illustrations. Cloth. Pp. 231. Price, $1.00 net. Philadelphia and London: W. B. Saunders & Co. 1900.

NINETEENTH REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Transmitted to the Legislature February 13, 1899. Cloth. Pp. 771. (With Accompanying Maps for 1898, in separate volume.) New York and Albany: Wynkoop, Hallenbeck, Crawford Co. 1899.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. With 372 Illustrations. Third Edition, Revised. Cloth. Pp. 873. Price, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1900.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by The Royal Medical and Chirurgical Society of London. Volume lxxxiii. (Second Series, Volume lxv.) Cloth. Pp. 349. London: Longmans, Green & Co. 1900.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Second Series. Vol. v. Enamel-Fyuner. Cloth. Pp. 1127. Washington, D. C.; Government Printing Office. 1900.

TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY, 1900. Fifty-first Annual Session Held at Anderson, Indiana, Thursday and Friday, May 24 and 25, 1900. Cloth. Pp. 478. Indianapolis, Ind.: Wm. B. Burford. 1900.

PHYSICAL DIAGNOSIS OF DISEASES OF THE CHEST. By Richard C. Cabot, M.D., Physician to Out-Patients, Massachusetts General Hospital. With 142 Illustrations. Cloth. Pp. 310. Price, $2.50. New York: Wm. Wood & Co. 1900.

PAMPHLETS.

ADDRESS BEFORE THE AMERICAN DERMATOLOGICAL ASSOCIATION. By the President, Henry W. Stelwagon, M.D., at the Twenty-fourth annual meeting held in Washington, May 1, 2 and 3, 1900, in connection with the Fifth Triennial Session of Congress of American Physicians and Surgeons. 1900. Paper. Pp. 12.

A STUDY OF DIABETES—ITS NATURE, CAUSE AND CURE. By S. G. Hubbard, M.D., New Haven, Conn. Reprinted from the Proceedings of the Connecticut Medical Society.

DEGENERATIVE RESULTS OF DEFECTIVE HEREDITY. By Chas. Denison, A.M., M.D., Denver, Colo. Reprinted from Transactions of Colorado State Medical Society.

DIPHTHERIA, ITS RESTRICTION, PREVENTION AND SUPPRESSION. Published by the Illinois State Board of Health. 1900. Paper. Pp. 14. Springfield, Ill.: Phillips Bros. 1900.

MEDICAL LEGISLATION. Gov. Thomas' Veto of the Colorado Medical Bill. The Love Medical Bill of Ohio. Medical Ethics. Paper. Pp. 16. Price, $0.05. Columbus, Ohio. Medical Talk Publishing Co.

PERMANENT NONPROGRESSIVE ATAXIA, WITH A CLINICAL REPORT OF THREE CASES. By Sanger Brown, M.D. Chicago: Reprinted from Am. Jour. of the Med. Sciences.

PRESIDENT'S ADDRESS. Semi-Centennial Anniversary South Carolina Medical Association, April 18, 1900. By W. Peyre Porcher, M.D., Charleston, S. C. Paper. Pp. 25. Charleston, S. C.: Walker, Evans & Cogswell Co. 1900.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. New Series, Vol. iii. October, 1900. No. 10. Paper. Pp. 36. Published by the Society. 1900.

SEVENTY-SIXTH REPORT OF THE ROYAL SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS. Paper. Pp. 144. Price, 1s. to Nonmembers.

SUPPURATIVE MIDDLE-EAR AND MASTOID DISEASE AND SOME OF THEIR BRAIN COMPLICATIONS—SOME CASES CITED. By Redmond W. Payne, M.D. San Francisco: Reprinted from Pacific Med. Jour.

THE APPLICATION OF THE WIDAL-GRUBER REACTION WITH DRIED BLOOD. By Robt. R. Dinwiddie, M.D. Reprinted from the Jour. of Applied Microscopy.

THE CONDENSED ACTING RAYS OF SUNLIGHT AS A REMEDIAL AGENT ON THE TREATMENT OF TUBERCULOSIS. By J. W. Kime, M.D., Fort Dodge, Ia. Paper. Pp. 16. Fort Dodge, Ia.: Post Publishing Co. 1900.

THE OPHTHALMOSCOPE AS AN AID IN MEDICAL DIAGNOSIS. By Willis O. Nance, M. D., Chicago.

TRADE PAMPHLETS.

DIGESTION, A FUNCTION OF PLANTS AS WELL AS OF ANIMALS. Vegetable vs. Animal Digestives. The Question of Digestive Ferments a Question of Environment. Paper. Pp. 48. American Ferment Co. Jersey City, N. J.

GENERAL OUTLINE OF THE PLANS AND PURPOSES OF THE PAN-AMERICAN EXPOSITION, May 1 to November 1, 1901, at Buffalo, N. Y. Paper. Pp. 47. Buffalo, N. Y.: Gies & Co.

PAPOID AS EXHIBITED IN JOHNSTON'S DIGESTIVE TABLETS. Paper. Pp. 24. Johnson & Johnson. New Brunswick, N. J.

SIXTH EDITION CATALOGUE OF ELECTRICAL INSTRUMENTS FOR PHYSICIANS AND SURGEONS. Paper. Pp. 126. R. V. Wagner & Co. Chicago.

WYETH'S PREPARED FOOD FOR INFANTS AND INVALIDS. Paper. Pp. 14. John Wyeth & Brother. Philadelphia.

Miscellany.

GENERAL REMARKS ON THE GUNSHOT WOUNDS OF 1898 AND 1899.

[Extract from Annual Report, now in press, of the Surgeon-General of the Army.]

Of the 4919 men injured by gunshot during the years 1898 and 1899, 586 were killed and 4333 were wounded and received into the field and other hospitals. The killed constituted 11.9 per cent. of those struck; the wounded 88.1 per cent. In other words, 1 man was killed for every 7.4 wounded. The Mauser bullet must therefore be regarded as less deadly than the larger missile used during the Civil War. The "Medical and Surgical History" of the Civil War shows the following casualties:

	Killed.	Wounded.
United States troops	59,860	280,040
Confederate troops	51,425	227,871
Total	111,285	507,911

In percentages the casualties were: killed 17.97; wounded 82.03, or 1 man killed to every 4.56 wounded. The relative proportion of killed was therefore considerably larger during the Civil War than during our recent experiences. It is to be noted also that many of the wounds of the past two years were made by missiles of large caliber. Of those reported in 1899, 471 were specially stated as having been caused by the Remington bullet of caliber .45. It is safe to say that had the whole number of wounds received been inflicted by the

smaller Mauser or Krag-Jorgensen bullet the percentage of immediately fatal wounds would have been materially lessened.

The less deadly character of the injuries inflicted by the modern bullet is manifested also when we exclude the killed and regard only those wounds which came under the care of the surgeons. Of these, during the two years, there were 4333, and 259 of the patients, or 6 per cent. of the whole number, died. The corresponding percentage from the records of the Civil War was 14.3. Table C in Part I of the medical volume of the "Medical and Surgical History of the War of the Rebellion," shows that among the white troops of the army there were borne on the reports of sick and wounded 230,018 gunshot wounds, of which 32,907 or 14.3 per cent. proved fatal. The marked reduction of the ratio of killed to wounded may be placed to the credit of the small-caliber bullet; but the lessened mortality among the cases which came into hospital may not wholly be attributed to the humane character of the wounds inflicted by this missile. Due credit must be given to the improved surgical methods of the present day. Wounds of any region of the body may be taken in comparison and the result will always be found to show a decided lessening in the percentage of cases ending fatally among those of the past two years as compared with those of the Civil War. Take, for instance, gunshot wounds of the femur. During the Civil War surgeons in the field hospitals regarded a fractured femur as a serious menace to life, the danger from which was believed to be materially lessened by an immediate amputation. The field-hospital surgical work after a battle consisted in great part of amputations, excisions and resections. Of 6576 fractures of the femur 2923 cases were treated by primary amputation, 186 by resection and the remaining 3467 by conservative or expectant measures; this conservative action being due in many cases to a want of favorable conditions for the performance of primary operations. The limb was promptly amputated in 44.4 per cent. of these gunshot fractures. On the other hand during the past two years 82 cases of gunshot fracture of the femur were reported, 6 of which were treated by primary amputation and 2 by resection, the remaining 74 cases being treated by conservative methods, not because the conditions were not favorable for the performance of primary operations, but because of a conviction that under present methods of treatment the limb could be preserved without adding materially to the danger of life. The limb was lost through surgical intervention in only 7.3 per cent. of the cases.

Not only limbs but lives were saved by the surgical practice of the past two years. In the 82 gunshot fractures of the femur the upper third was involved in 32, of which 5 were fatal, the middle third in 27, of which 3 were fatal, and the lower third in 23, of which 1 was fatal. The mortality varied from 4.3 per cent. of the cases in which the lower third was fractured to 15.6 per cent. of the cases in which the upper third was the site of the injury, whereas the corresponding percentages of fatal cases during the Civil War were respectively 42.8 and 49.7. The whole of the lessened mortality in these serious fractures may be credited to the protection given to the wound by the first-aid dressing and to the care exercised in the subsequent aseptic treatment of the fractured limb.

In penetrating wounds of the thorax the rate of mortality fell from 62.6 per cent. during the Civil War to 27.8 per cent. during the years 1898 and 1899. The Civil War reports show 8403 cases in which the results were determined; 6260 deaths occurred among the number. The reports for the later years, as already stated, show 198 cases, of which 55 were fatal.

There were during the Civil War 3475 penetrating wounds of the abdomen in which the ultimate results were determined; 3031 of these, or 87.2 per cent. of the total, proved fatal. During the years 1898 and 1899 116 cases, 81 fatal, were recorded, the fatal cases constituting 70 per cent. of the total. Of 10 cases in which laparotomy was performed 9 were fatal.

The alteration in the percentages of mortality in fractures of the cranium is less marked than in wounds of other parts of the body. Of 4243 cases of cranial fracture during the Civil War, 2514, or 59.2 per cent. were fatal. In 1898 and 1899 68 cases were recorded, with 37 deaths, the latter forming 54.4 per cent. of the whole number.

Societies.

Indian Territory Medical Association, Muscogee, Dec. 4-5.
Pan-American Medical Congress, Havana, Cuba, Dec. 26-28.
Western Surgical and Gynecological Association, Minneapolis, Minn., Dec. 27-28.

THE OHIO COUNTY (W. Va.) MEDICAL SOCIETY at its recent meeting at Wheeling elected the following officers: Dr. William R. Taylor, president; Dr. Charles A. Wingerter, vice-president; Dr. Henri P. Linsz, secretary, and Dr. Robert J. Reed, treasurer.

THE PEORIA (Ill.) CITY MEDICAL SOCIETY, at its annual meeting, October 30, elected Dr. Emerson M. Sutton, president; Dr. William T. Sloan, vice-president; Dr. Emma J. Lucas, treasurer; Dr. Elmer M. Eckard, secretary; Dr. Albert L. Corcoran, censor, and Dr. Aloysius J. Kanne, pathologist.

THE MEDICAL CLUB, composed of women physicians of New Jersey, was organized November 2 at Newark. The officers elected were Dr. Katherine D. Porter, Orange, president; Dr. Mary D. Hussey, East Orange, recording secretary; Dr. Isabel M. Geddes, Newark, corresponding secretary, and Dr. Augusta M. Madison, Newark, treasurer.

THE CENTRAL DISTRICT MEDICAL SOCIETY, at its session, November 2, at Sedalia, Mo., elected Dr. Joseph B. Norman, Pilot Grove, president; Drs. Squire H. Redmon, Tipton, Ethan F. Statts, Beaman, and A. E. Monroe, New Lebanon, vice-presidents; Dr. William O. Dunlap, Sedalia, treasurer, and Dr. Horace B. Cole, Sedalia, secretary.

LUCAS COUNTY (Ohio) MEDCIAL SOCIETY met in Toledo, November 2. Dr. Park L. Myers read a paper on "Some Thoughts on the Alleged Deterioration of the Human Female as a Factor in Reproduction," and Dr. Orville W. Kimbell a paper on "Diphtheria." "Prophylaxis and Treatment of Incipient Tuberculosis" was the subject for general discussion, opened by Drs. J. T. Jacobson and William A. Dickey.

THE MEDICAL SOCIETY OF THE COUNTY OF KINGS held a special meeting in Brooklyn, November 4, when eulogies were delivered on the following members who had died during the year: Drs. John Cargill Shaw, Charles Edward West, John Cooper, Aaron Edgerton Peck, Robert Francis Cunnion, Henry Dwight Bliss, Landon Carter Gray, Alexander Johnston Chalmers Skene, Julius Charles Rappold, Frank Stephen Milbury and William Webb Browning.

THE AESCULAPIAN SOCIETY OF THE WABASH VALLEY held its fifty-fourth annual meeting at Paris, Ill., October 26, and elected Dr. John A. Baughman, Neoga, president; Dr. Francis D. Lydick, Paris, vice-president; and Dr. Harry McKennan, Paris, secretary and treasurer. A resolution was passed by the society prohibiting its members from advertising special methods of treatment, on pain of expulsion. Among the papers read were those by Dr. W. J. Fernald, Rantoul, on "Strychnia as a Therapeutic Agent"; Dr. E. L. Birch, Robinson, on "Puerperal Hemorrhage"; Dr. J. L. Firebaugh, Robinson, on "Shock," and President Charles B. Johnson, of the State Board of Health, Champaign, on "Some Medical Discoveries of the Nineteenth Century."

San Francisco County Medical Society.

Regular Meeting, Oct. 9, 1900.

SOME ACCIDENTS IN THE USE OF OBSTETRIC FORCEPS.

DR. HENRY GIBBONS, JR., presented this paper. He bases his experience with forceps on 1200 obstetric cases in private practice, and 150 in consultation. In 190 of these cases forceps had been used. With ordinary care, he thinks serious injury to the mother from forceps used was not likely to occur. He has never known a death to take place, or anything more than laceration of the soft parts. In these days of aseptic methods death should not occur, but the injury to the soft parts may leave important disabilities. Extensive lacerations of the perineum are more likely to occur in occipito-posterior positions, when rotation anteriorly has failed to take place. Lacerations of the neck of the uterus not infrequently occur from the use of the instruments by attempting to extract the head before full dilatation of the cervix takes place; and if the patient's strength is good, and there are no other contra-indications, the forceps should never be applied until dilatation is complete. He called attention to the liability of bruising the tissues covering the inner surface of the pubic arch by

the jamming of the head and forceps against it. This occurs when the head is still in the oblique diameter, and pretty well up, so that the handles of the ordinary forceps can not be depressed sufficiently to insure traction in the direction of the axis; and in these cases axis-traction forceps should be used, preferably those of Tarnier.

The danger to the child is far more serious than to the mother. Aside from minor injuries, which are not infrequent, but are usually of little importance, fracture of the bones of the head, rupture of vessels in the brain, or lacerations of the brain itself, may occur. The conditions of election for the forceps are complete dilatation of the cervix, sufficient time for molding of head, that it may more easily pass through the pelvis, completion of the long rotation in occiput or chin posterior positions, and rotation of the head into the conjugate diameter of the pelvis. When these conspire, the forceps, in competent hands, have almost no danger to the child, and the danger should not be much, even with the tyro, if he has some experience in the use of tools and is a man of good judgment. But as we recede from these conditions the risk to the child becomes greater. When the head is still in the oblique diameter, and not high up, the risk is not greatly increased, provided the instruments are applied to the sides of the head and in its occipitomental diameter with the occiput to the heel of the blades. The difficulties of application have, however, increased, and not even an expert can always get them in exact position. If not exactly applied they grasp the head more or less obliquely, and if much force is required to effect delivery any of the accidents named above may occur. He thinks there was no excuse for the accidents which occur from forceps slipping. Such an accident has never occurred in his practice. If the index finger of the hand that clasps the lock be extended to touch the presenting part the operator at once appreciates when slipping begins and can avoid it. All the risks to the child are increased the higher the head is in the pelvis, with the added danger resulting from the impossibility, with the ordinary forceps, of making traction in the direction of the axis of that part of the pelvis in which the head rests, and of being required to apply extra force, since much is lost by the necessary dragging of the head against the pubic arch instead of under it. The Tarnier forceps are far better suited to such cases. When the head is at the brim the dangers are supreme. None but an axis traction forceps should be used in such cases.

He urged more conservatism in the use of instruments in labor, bearing in mind the fact that the duration of normal labor in primipara averages twenty hours, and often extends into the second, or even the third, day without serious inconvenience or harm; and in the absence of those emergencies which imperatively call for the application of forceps the case should be left to nature.

Dr. James F. McCone considered episiotomy useful for preventing deep perineal tears, and thought Eichelberg's high incisions the best method of performing episiotomy. The necessity of waiting for the molding of the child's head, particularly in women of rhachitic pelves, should be emphasized. He had seen spoon-like depressions that allowed heads to pass through contracted straits. Had forceps been applied too early injuries high up in the pelvis would have resulted.

TREATMENT OF LARYNGEAL TUBERCULOSIS.

Dr. Robert D. Cohn, in this paper, divided the disease, as regards its therapeutics, into three stages. In the first stage, with the exception of a circumscribed infiltration, or ulceration, the larynx is healthy. In this stage, the only one in which a permanent cure can be hoped for, the treatment consists in curettement in case an infiltration be present; in cauterization with lactic acid in case an ulcer be present. If the general condition, especially that of the lungs, be good these procedures are imperative and should be repeated at intervals of from one to three weeks until the diseased condition is completely removed.

In the second stage the larynx presents extensive infiltrations or ulcerations. Here complete elimination of the morbid tissue can no longer be hoped for, but antiseptic treatment comes to the front, the author preferring antiseptic inhalations of carbolic or boracic acid or lysol. If the epiglottis permit an inspection of the interior of the larynx, the antiseptic swab can be used to advantage. By these methods secondary infection, and the terrible dyspenea and dysphagia of the last stage is prevented.

Finally, if the case is first seen in its last pitiful stage, all that can be done is to treat it symptomatically, to administer a morphia powder before each meal, or, better still, to apply a 10 or 20 per cent. solution of cocain to the pharynx. In impending suffocation, tracheotomy must of course be performed.

TECHNIC OF THE NEW BASSINI OPERATION.

Dr. Campbell Ford presented a short paper describing the technic from his own observations.

Dr. Henry J. Kreutzmann presented two pathological specimens, namely, a uterine fibroid and a multilocular cyst of the ovary.

Omaha Medical Society.

Meeting of Oct. 9, 1900.

FRACTURES OF THE NECK OF THE FEMUR.

Dr. J. P. Lord stated that most works give a very antiquated treatment for these fractures. They usually advise the use of Buck's extension and sand-bags. Senn's method of securing better apposition of the fragments is much used and approved. All authorities advise reduction and the best possible apposition. The ideal treatment is difficult to carry out. Improper immobilization and fixation are the chief causes of non-union. The old methods of the weight and pulley fail; eversion occurs; poor results follow. To best show his method, he gave the details of a case of fracture of the narrow part of the neck of the femur in a man of 37, weighing 190 pounds. He had leaped across the "horse" in a gymnasium and landed beyond the mat on the floor, falling on his hip; there was immediate eversion and ¾ inch shortening. These two things led to the diagnosis of fracture at the narrow part of the neck rather than at the base. General anesthesia was given; 4-inch adhesive strap, with block at the end, was run from the perineum down; the malleoli were protected by cotton around them, not over them, as is too common. The limb was covered with cotton and bandaged; plaster-of-paris bandage was then placed from the toes to mid-thigh; traction was made from a pulley in the ceiling behind the patient to a band pulling against the perineum. The extension block was pulled to over-correction of the shortening. A padded board 2½ feet long was then incorporated into the outer and posterior aspect of the thigh and carried up and behind the greater trochanter. The pelvis was well padded and the plaster bandage was then carried up on to the trunk to the cartilage of the eighth rib. The mattress was reinforced with boards beneath to prevent sinking down in the bed. Fifteen pounds were placed on the extension and it was believed that appositon and fixation were well done. In eight weeks the dressing was reapplied and in four more it was removed. There was no eversion and only ¼ inch of shortening. There was no limp. The old methods give about 2 or 2½ inches of shortening and many cases of non-union. Serious trouble often results in the knee or ankle from improper extension.

Dr. A. F. Jonas, in discussion, said that Senn devoted much time to the subject of impacted fractures; he reached the conclusion that impaction was often desirable; when there was no shortening no disturbance was to be made. The aged often die from these fractures and great care must be taken. Dr. Jonas was of the opinion that the method outlined by Dr. Lord was a good one, but not the only one. Buck's extension and the sand-bags are not good; they move or are moved. He has had most excellent results from the Volkmann splint; it is a tin trough in which the thigh and leg rest; lateral arms of iron project from the sides so that turning of the splint is impossible. Extension is made in the ordinary manner; eversion is impossible. An advantage of this splint is that it lies clear of the bed.

Dr. Hamilton said that he had more annoyance from such fractures than from any other troubles. When the periosteum

was torn away from the proximal end of the bone, non-union was certain, no matter what apparatus was used.

DR. J. CAMERON ANDERSON said that the old classification of intra- and extra-capsular was not a good one; he preferred to class them as at the small part or at the base of the neck. Senn's apparatus was by no means approved by the best surgeons. In sleety times injury of the soft parts forbids any fixed dressing. Fractures of the neck in children are often overlooked or called hip-joint disease.

DR. A. F. JONAS related his experiences and thoughts on the International Medical Congress, in extenso.

Vermont State Medical Society.

Annual Meeting, Rutland, Oct. 11 and 12, 1900.

(Continued from p. 1232.)

President Dr. M. R. Crain, Rutland, in the chair.

LOBAR PNEUMONIA.

DR. W. L. HEATH, Richmond, presented a paper on lobar pneumonia. He defined it as an acute disease in which a specific parasite invades the air cells of one or more pulmonary lobes, where it grows in the fibrinous medium exuded from the capillaries and generates a toxin that affects the system at large with constitutional disturbances. In the treatment of pneumonia he recommended the inhalation of chloroform in connection with oxygen, by adding one or two drams to the water in the wash bottle; calomel for its effect on the bowels as well as its absorptive effects, and blood-letting in robust patients. Aconite is a safe drug for relaxing the arterial system. It withdraws the blood from the venous system and stores it in the arterial. Alcohol is valuable and should be given early; guaiacol with hypophosphites in convalescence. For the cough, codein or heroin, with muriate or carbonate of ammonium. Steam inhalations are useful and comforting to the patient. The application of cold to reduce temperature is valuable. The diet should be liquid and the free administration of water is recommended.

VAGINAL HYSTERECTOMY.

DR. C. W. STROBELL, Rutland, said the operation of vaginal hysterectomy is more difficult of performance than its progenitor, which enters the abdomen along the linea alba. The operation has met with violent opposition. The objections urged against it are the alleged impracticability of rendering the birth canal sterile, danger of hemorrhage, narrowness of working space, and danger of pelvic hernia and injuring the intestine. Improved technique, and the combined lithotomy and Trendelenburg posture have proved the fallacy of most of these and experience has shown pelvic hernia to be rare. The writer noted that nausea and surgical shock were markedly less when the lower route was taken, and that intestinal obstruction and intestinal paralysis were rare.

Vaginal hysterectomy is performed by three methods, namely, the American, the German and the French. Of these, the American is the most surgical, and the French is the safest in the hands of most operators.

PUERPERAL SEPTICEMIA.

DR. E. M. POND, Rutland, read a paper with the above title. Puerperal septicemia is a preventable disease; it is a wound infection, and arises from septic material being carried into raw surfaces at the time of confinement. As a rule the poison is introduced into the wound by the physician or attendants, or by instruments or dressings. There are cases, however, in which the disease arises from pus-tubes, pelvic abscesses, etc. A confinement case should be conducted as aseptically as an abdominal section. Post-partum douches should never be used excepting as symptoms demand them, for the reason that the uterine cavity is supposedly aseptic, while the vagina is not, and by reversing the flow secretions may be carried within the uterus, thus favoring infection. Lacerations and contusions should be treated on surgical principles, and aseptic dressings always used after confinement. Sapremia generally arises from retained membranes or clots, and is promptly relieved by ultrauterine irrigation.

RUPTURE OF THE UTERUS DURING CHILDBIRTH.

DR. L. H. HEMENWAY, Manchester, reported a case of rupture of the uterus during confinement, with recovery of the patient. The symptoms were sudden and extreme exhaustion of the patient, with rapid and feeble pulse, great pallor, and an anxious countenance. An examination showed the head presenting, and a shoulder and arm could be plainly felt just beneath the abdominal wall. An attempt to put on the forceps failed, and the child was turned and delivered. The woman made a slow but perfect recovery.

ABDOMINAL PALPATION IN OBSTETRICS.

DR. F. E. CLARK, Burlington, advocated the employment of abdominal palpation in all obstetrical cases. He said that the presentation and position could be made out in nearly all cases, by this means, and he deprecated frequent vaginal examinations. If practiced early, malpositions could be corrected. The special point urged was that vaginal examinations increased the danger of sepsis, and should therefore be practiced as infrequently as possible. The writer explained in detail the technique of abdominal palpation, and urged all physicians to become as expert as possible in the method.

(To be Continued.)

Toronto Clinical Society.

First Regular Meeting of Season, October 3, 1900.

President Dr. W. H. B. Aikins in the chair.

PRESIDENT'S ADDRESS.

DR. AIKINS referred to the honor conferred on the Society through Mr. I. H. Cameron, one of their number, being elected an honorary F. R. C. S. The Society now has three members who hold this degree. The better consideration of suggestive therapeutics was insisted on. He thought this branch of medicine was now being put on a scientific basis.

THE MEDICAL SIDE OF THE SOUTH AFRICAN WAR.

DR. GEORGE STIRLING RYERSON delivered an address on the above subject. It dealt particularly with typhoid fever, dysentery and veldt fever. He especially eulogised the splendid work of the hospital orderlies. Their work was indeed trying. He had not seen any typhus fever. A noteworthy fact was the total absence of smallpox in an army of 200,000 men, which proved most emphatically the importance and the power of vaccination. He thought statistics would prove later that typhoid inoculation was a valuable means of preventing this scourge of armies. No Canadians had been inoculated, and there had resulted no mortality from the process.

RETROPHARYNGEAL ABSCESS.

DR. G. SILVERTHORN presented a child less than a year old with a retropharyngeal abscess following an attack of measles. Symptoms occurring were dyspnea and convulsions. Operation was performed externally through the sternomastoid muscle of the right side. Recovery took place within a week from that date. There was no history of syphilis or tuberculosis, and it was not carious in origin.

DISPLACEMENT OF THE LIVER.

DR. H. B. ANDERSON presented a patient and described the history of the case. The subject was a young man aged 25 years, who for the past ten years had repeated attacks of asthma. He had also had pleurisy on the right side three times. The lower border of the liver was below the umbilicus, and percussion over the normal position of the organ elicited a tympanitic note. Rest in bed in this case always resulted in beneficial results. The interesting point in the case is that it is associated with definite attacks of spasmodic asthma.

PECULIAR BULLET COURSE.

DR. SILVERTHORN presented this paper and specimens. They were from the body of a father who had been shot by his son. On the left side, commencing 1⅝ inches outside the nipple line, and on a line with the nipple itself, was the wound of entrance, ⅜ inch wide. On following this wound backward, the bullet was found to have fractured the left fifth rib and torn up a portion of its upper edge 2¾ inches from its junction with its cartilage. It then passed through the pleura and through the anterior angle of the upper lobe of the lung, and then through the pericardium; then along the left border of

the heart, which it grooved up, and passed on backward, tunneling the fat in the auriculo-ventricular groove; it then passed out again from the pericardium and backward through the anterior portion of the lower lobe, and still backward into the aorta, and just through the aorta opposite the ninth dorsal vertebra, causing considerable amount of hemorrhage into the posterior mediastinum; but the bullet could not be found. It could not be found where it was apparently lost, so an examination of the arteries was made; it was found in the left femoral artery, just below where the profunda femoris is given off. The size of the bullet was ¼ inch in diameter, and in impinging the posterior wall of the aorta had perforated that wall supported behind by the vertebral column, had fallen back into the blood-stream, and, either through the force of gravity or the force of the blood-current, or both combined, had been swept on to the position in which it was ultimately located. The specimen of the artery was also shown with the bullet in situ.

Therapeutics.

Chronic Rheumatism.

℞.	Potassii iodidi	ʒii	8
	Vini colchici rad	ʒiiss	10
	Aquæ menth. pip., q. s. ad	ʒiii	96

M. Sig. One teaspoonful every four hours.

Sweating Feet.

℞.	Sodii salicylatis	gr. xxx	2
	Potassii permanganatis	ʒi	4
	Bismuthi subnitratis	ʒiss	48
	Acidi borici, q. s.	ʒiii	96

M. Sig. Dust on the feet and into the stockings and shoes every morning.

First Stage of Pleurisy.

℞.	Tinct. aconiti	m. vii	45
	Spts. etheris nitrosi	ʒvi	24
	Syrupi simplicis, q. s. ad	ʒiv	128

M. Sig. One dessertspoonful every hour until eight doses are taken, then every two or three hours.

Furuncles.

℞.	Acidi carbol.	gr. v	33
	Ext. ergotæ flu.	ʒi	4
	Pulv. amyli		
	Zinci oxidi, āā	ʒii	8
	Ung. aquæ rosæ	ʒviii	32

M. Ft. unguentum. Sig. Spread the ointment on a thick layer of absorbent cotton and hold in place by means of adhesive plaster. —L. D. Bulkley.

Myalgia.

℞.	Linimenti chloroformi		
	Tinct. aconiti		
	Tinct. opii		
	Spiritus camphoræ, āā	ʒi	32

M. Ft. linimentum. Sig. Apply locally two or three times a day.

Mucous Patches in the Mouth.

℞.	Acidi borici	ʒii	8
	Glycerini	ʒii	64
	Tinct. myrrhæ	ʒi	32
	Aquæ rosæ, q. s. ad	ʒviii	256

M. Sig. To be used locally to the patches in the mouth.

Mucomembranous Colitis.

℞.	Bismuthi subnitratis		
	Bismuthi salicylatis, āā	ʒiiss	10
	Mucilaginis cydonii (quince)	O i	512

M. Sig. Use as rectal injection.

Aortic Insufficiency in Acute Articular Rheumatism.

℞.	Sparteinæ sulphatis	gr. iss	09
	Infusi digitalis		
	Syrupi aurantii amari, āā	ʒi	32
	Aquæ—gum	ʒii	64

M. Sig. A tablespoonful every four hours.
—*Riforma Medica.*

Eczema of the Scalp in Children.

℞.	Resorcini	gr. viii	5
	Sulphuris	gr. xl	2 66
	Lanolini	ʒii	8
	Adipis, q. s. ad	ʒiii	96

M. Sig. Apply once or twice daily.

Acute Gastritis in Children.

℞.	Acidi carbolici	gtt. iv	25
	Sodii bicarb.	ʒiss	6
	Elix. aurantii	ʒss	16
	Aquæ, q. s. ad	ʒiv	128

M. Sig. One teaspoonful every three hours.

Silver Nitrate in Intestinal Tuberculosis.

Petit, in *Klin. Ther. Woch.*, states that silver nitrate, in intestinal tuberculosis of children, both disinfects the intestine and promotes the healing of the tuberculous ulcers.

℞.	Argenti nitratis	gr. 1/7	009
	Amyli		
	Pulv. glycyrrhizæ, āā	gr. 3/10	02

M. Ft. pilula No. i. Sig. One such pill to be given to a child between 5 and 10 years of age once a day for three days, first emptying the rectum by means of an enema of normal salt solution. Increase the number of pills to three a day for two days if the diarrhea has not ceased.

For children under 5 years he gives silver nitrate in solution or as an enema.

℞.	Argenti nitratis	gr. 1/7	009
	Aquæ destil	ʒi	32
	Syrupi rubi idæi, q. s.,	ʒiiss	80

M. Sig. One tablespoonful every fifteen or twenty minutes until the entire amount is taken, to a child over 6 months of age. —*N. Y. Med. Jour.*

Dry Pleurisy.

℞.	Tinct. aconiti	m. x	66
	Spts. etheris nitrosi	ʒii	8
	Liq. potassii citratis	ʒiii	96
	Syrupi tolutani, q. s. ad	ʒiv	128

M. Sig. Two teaspoonfuls every hour.

Pleurisy With Effusion.

℞.	Ammonii chloridi		
	Ammonii carbonatis, āā	ʒi	4
	Tinct. cubebæ	ʒiii	96
	Syrupi tolutani, q. s. ad	ʒiv	128

M. Sig. Two teaspoonfuls every hour. —Butler.

Locomotor Ataxia—Systemic Treatment.

℞.	Ferri lactatis	gr. xl	2 66
	Ext. cinchonæ	ʒi	4
	Ext. nucis vomicæ	gr. viiss	5
	Ext. gentianæ, q. s.		

M. Ft. pilulæ No. xx. Sig. One or two pills three times a day. —Erb.

Topical Application for Burns.

℞.	Tannin		
	Alcoholis, āā	ʒiiss	10
	Etheris sulphurici	ʒiiss	80

M. Sig. For external use. —*Bul. Gén. de Thér.*

Ringworm of the Scalp—Tinea Circinata.

℞.	Hydrarg. chloridi corros	gr. 1/6	01
	Acidi tartarici	gr. viii	5
	Cocainæ hydrochloratis	gr. xv	1
	Alcoholis		
	Aquæ destil., āā	ʒi	32

M. Sig. Scrape the affected parts well and make multiple subcutaneous injections of the above solution.
—DuCastel: *Munch. Wed. Woch.*

Simple Conjunctivitis.

℞.	Zinci sulphatis	gr. 2/5	026
	Aquæ destil.	ʒiv	16

M. Sig. To be used as a lotion for the eye.

℞.	Plumbi acetatis neutralis	gr. 1/5	013
	Aquæ destil.	ʒiiss	10

M. Sig. As a lotion.
Keep cold compress constantly on the eye. —Ohlemann.

Eczema of the Scalp.

℞. Hydrarg. sulph. rub. .....gr. v | 33
Sulphuris sublim. .....gr. xx 1 | 33
Ol. bergamot.....gr. viii | 5
Vaselini, q. s. ad.....℥i 32 |
M. Ft. unguentum. Sig. Use locally night and morning.
—Max: *Med. Prog.*

Prostatorrhea.

℞. Tinct. nucis vomicæ .....m. xvi 1 |
Tinct. cantharidis .....m. viii | 5
Liq. ferri et ammonii acetatis, q. s. ad..℥viii 256 |
M. Sig. One tablespoonful three times a day, after meals.

Irritable Bladder.

℞. Salol |
Tinct. hyoscyami, āā.....℥ii 8 |
Infusi buchu, q. s. ad.....℥vi 192 |
M. Sig. One tablespoonful three times a day.—Fothergill.

Scarlatinal Sore Throat.

℞. Hydrargyri chloridi corros.....gr. i | 06
Ammonii sulph. ichthyolati.....gr. lxxv 5 |
Aquæ destil., q. s. ad .....℥iii 96 |
M. Sig. Use as a local application two or three times a day.
—A. Baginsky: *Med. Age.*

Dr. Unna, in *Medical News*, recommends paraformaldehyde as a caustic preparation for the removal of small cutaneous growths.

℞. Paraform .....gr. xv 1 |
Ol. ricini .....m. viii | 5
Collodii .....℥v 20 |
M. Sig. Apply externally

Paraform is not soluble in collodion, but sufficient is taken up for this application. The caustic action is limited and not severe and can be applied by the patient himself.

Acute Coryza.

℞. Menthol .....gr xv. 1 |
Salol .....℥i 4 |
Acidi boracici .....℥iv 16 |
M. Sig. Use as an insufflation in the nose two or three times a day. —Garel.

To Prevent Erections and Nocturnal Emissions in Treatment of Gonorrhea.

℞. Lupulin .....gr. xv 1 |
Camphoræ .....gr. ii | 12
Ext. humuli, q. s. |
M. Ft. pilulæ No. x. Sig. Take six a day.

Infantile Eczema.

℞. Acidi salicylici .....℥ss 2 |
Bismuthi subnitratis .....℥vi 24 |
Amyli .....℥iiss 10 |
Unguenti aquæ rosæ .....℥ii 64 |
M. Ft. unguentum. Sig. Apply locally two or three times a day. Of use in the moist variety.

Infantile Diarrhea.

℞. Acidi lactici .....gr. xxxvi 2 | 36
Syrupi cydonii (quince).....℥viiss 30 |
Aquæ destil. .....℥i 32 |
M. Sig. Teaspoonful every two hours.

Thiercelin, in *Gazetta Med. Lombarda*, advocates the use of lactic acid in doses of 30 grains daily in children less than one year old. —*N. Y. Med. Jour.*

Atonia Intestinalis—Deficient Peristalsis.

℞. Sodii benzoatis |
Pulv. rhei rad., āā.....gr. viii | 5
Ext. nucis vomicæ .....gr. 1/3 | 02
M. Sig. One powder two or three times a day.—Huchow.

Extensive Burns.

℞. Europhen .....℥i 4 |
Vaselini |
Lanolini, āā.....℥i 32 |
M. Sig. Apply locally three or four times a day.

℞. Ichthyol .....gr. xl 1 | 66
Zinci oxidi .....℥i 32 |
Magnesii carbonatis .....℥iv 16 |
M. Sig. Apply locally twice a day.

Ozena.

℞. Creosoti .....gr. lxxv 5 |
Alcoholis—70 per cent. .....℥iiss 10 |
Glycerini .....℥x 40 |
M. Sig. Apply locally. —Ferrari.

Enuresis.

℞. Tinct. belladonnæ .....℥ss 16 |
Ext. ergotæ fluidi .....℥i 32 |
Tinct. nucis vomicæ, q. s.....℥ii 64 |
M. Sig. Take twenty drops, in water, three or four times a day. —*Can. Med. Rec.*

Dysuria from Uric Acid.

℞. Acidi benzoici .....gr. iv | 25
Sodii boratis .....gr. xl 2 | 66
Aquæ, q. s. ad.....℥viii 256 |
M. Sig. Two tablespoonfuls every two hours. —Sajous.

Styes on the Eye.

Keiper states that styes are usually due to eye-strain. He recommends the following as a wash:

℞. Acidi borici .....℥i 4 |
Aquæ destil.....℥iv 16 |
M. Sig. Bathe the eyelids every hour.

Hypodermoclysis.

R. C. Kemp, in *Med. News*, states that the administration of normal salt solution hypodermically will prevent the development of certain symptoms sometimes produced by the administration of large doses of antistreptococcic serum, and that congestion of the kidneys, which sometimes occurs after the administration of antitoxic serum will not take place if twice the amount of normal saline solution be injected immediately after the administration of the antitoxin. The most suitable place for introducing the normal salt solution is in the lateral lumbar region, as there is no interference with respiration, nor pain on moving the limbs.

Medicolegal.

Right of City as to Location of Smallpox Hospital.—The case of Frazer and others vs. the City of Chicago was brought to recover damages for the menace to the health of the inhabitants in the vicinity of a smallpox hospital, or, rather, to those inhabitants who in the intended future use of the plaintiffs' property might become residents in the vicinity thereof, and who, by reason of its location, would be deterred from purchasing the plaintiffs' property, and the consequent loss in the speculative value thereof. But the Supreme Court of Illinois holds that no such cause of action could be maintained. It points out that power is expressly given, in the village act, "to erect and establish hospitals and medical dispensaries, and control and regulate the same." Consequently, the establishing of the smallpox hospital referred to was clearly within the police power of the city, and, the court holds, in the absence of carelessness or negligence, or of an abuse of that power in any way, the hospital could not be a public nuisance. Nor, it goes on to say, could it be a private nuisance unless it should become such in its subsequent use or unwarranted operation, having in view the peculiar conditions under which it was established and maintained. The law is well settled, it declares, that where a thing not malum in se, or a wrong in itself, is authorized to be done by a valid act of the legislature, and it is performed with due care and skill, in strict conformity with the provisions of the act, its performance cannot, by the common law, be made the ground of an action, however much one may be injured by it. But it was contended that it is an unreasonable, unusual, and extraordinary use of property to utilize it for the segregation of diseases. However, the court says that, under the express delegation of power by the legislature, it cannot hold that the application of property for the use of a smallpox or other hospital is such an unusual or unreasonable use of property as would take it out of the police power of the city, so as to render it liable for such application, when, as here, it is conceded that the pesthouse is rightfully located and well conducted. To this it adds that it can

see no difference, in principle, between the right of a city to establish and maintain a smallpox hospital, and to erect and use jails, fire-engine houses, calabooses, and the like. Greater care might be required in the maintenance of one than the other, and different considerations would undoubtedly enter into the selection of a site of a pest-house than of the fire-engine house or jail; but the city would be liable only for an abuse of authority or an unwarranted exercise of discretion in locating or maintaining the same, having reference to the present necessities, the crowded condition of the locality in which they are placed or maintained, and other pertinent facts and circumstances.

On Self-Treatment and Proof by Physical Acts.—Arkansas River Packet Company vs. Hobbs, is the title of a personal injury case brought by the latter-named party, and appealed, to the Supreme Court of Tennessee, by the former. At the trial, the jury was instructed that it was the duty of the plaintiff—Hobbs—upon being injured to do all reasonably within his power to have his knee cured and restored to its original condition. It was also instructed that if he selected and used all reasonably accessible means for that purpose, and for a time, on his own judgment and without medical advice, adopted and pursued such treatment as a physician of ordinary care, prudence, and skill would have used in treating an injury, the law would accept that action on his part as full discharge of his duty in that behalf, even though it might appear from the evidence at large that a more skilful treatment might have produced a more favorable result. These propositions the supreme court pronounces entirely sound and unobjectionable. The first, it says, announces the generally accepted doctrine that he who is injured in his person or in his property by the wrongful act of another should take reasonable precautions to repair the injury, and prevent the enhancement of ultimate damage; and the second, rightly applies that doctrine. The exercise of reasonable and ordinary care and prudence, according to the circumstances of the case, the court declares, is all that the law demands, and in no event will the wrong-doer be heard to say that the person injured was bound, at his peril to secure the services of the most skilful physician in the community, or to adopt the treatment which in the end would prove to be the most efficacious. The court also holds that the grounds on which the privilege of voluntarily exhibiting an injured limb to the jury is practically unanimously accorded to a plaintiff, to show the nature and extent of his injuries, by the authorities, which are greatly divided in opinion as to the court's power to compel such exhibition, justifies with like force the voluntary performance of physical acts which are in themselves fit and appropriate as illustrations of the same fact. Indeed, it thinks that allowing such physical demonstrations, with the privilege of all legitimate cross-examination to the adverse party, affords a superior method of getting at the truth, and produces a higher order of evidence than is usually attainable, in that it adds physical illustration to oral statement, and impresses the court and jury through the sense of sight as well as through that of hearing. It may be true, it says, that a designing witness can exaggerate the true condition of an injured limb by false and constrained movements, and yet that can not render the performance of physical acts inadmissible as evidence, any more than the equally obvious fact that he may give undue and false coloring to his oral statements renders him incompetent to testify by word of mouth. That objection goes only to the question of weight or credibility, and does not reach that of competency or admissibility.

Illegal Quarantine of Race and District.—The remedy by injunction the United States Circuit Court, Northern District of California, holds is the proper one for such a case as that of Wong Wai vs. Williamson and others. In other words, it, in this case, holds illegal and void, and to be kept by injunction from being enforced, such quarantine restrictions and regulations as the acting board of health and acting federal quarantine officer in San Francisco imposed upon the Chinese when they made their inoculation with Haffkine prophylactic a condition to their being allowed to leave the city for other parts of the state. To begin with, it finds that, while suitable provision was made in the city charter for the necessary legislation providing rules and regulations to secure the proper sanitary conditions in the city and for the protection of the public health, the board of health was without legislative authority to deal with the bubonic plague situation, through apparent lack of action on the part of the board of supervisors. And it says that when the municipal authority has neglected to provide suitable rules and regulations upon the subject, and the officers are left to adopt such methods as they may deem proper for the occasion, their acts are open to judicial review, and may be examined in every detail to determine whether individual rights have been respected in accordance with constitutional requirements. Then, too, it holds that the quarantine officer in the marine-hospital service of the United States at that port had no jurisdiction to impose quarantine regulations or restrictions upon any class of persons traveling from place to place within the state. But of perhaps still more importance, it holds that any quarantine regulation or restriction imposed upon any particular class of persons, as Chinese or Japanese, and not imposed upon others similarly situated, is an arbitrary and unreasonable interference with, and discrimination against, the individual liberty of the persons regulated and restrained, contrary to the provisions of the fourteenth amendment to the constitution of the United States, and therefore void. In Jew Ho vs. Williamson, where the evidence was such that the court says that, if it were within its province to determine the issue, it would be compelled to hold that the plague did not exist and had not existed in San Francisco, it holds unreasonable, unjust and oppressive, and therefore contrary to the laws limiting the police powers of the state and municipality in such matters, a quarantine of a district comprising 12 blocks containing 10,000 persons, with free intercommunication within the district. At the same time, it accords to the board of health the right to maintain special quarantines in places suspected of having disease, and the right to enforce such regulations as it may deem proper in order to secure an absolute exclusion of such places from the remainder of the community. And where suspicious cases are found and a quarantine is imposed upon the proper locality or house or building, the physician who has been attending the person afflicted, the court holds, should be permitted to continue to attend. In case of a death among the Chinese, a physician selected by the Chinese association interested, it also thinks, should be allowed to attend any autopsy that might be made. But this privilege, the court adds, should not be abused, and there should not be an effort on the part of everybody, out of curiosity and otherwise, to attend upon such autopsies, and there should be no unreasonable interference with the authority of the board of health in matters of this kind.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, November 3.

1 *Local and Regional Anesthesia with Cocain and other Analgesic Drugs, Including the Subarachnoid Method, as Applied in General Surgical Practice. Rudolph Matas.

2 *Cocain Analgesia from Subarachnoid Spinal Injection, with a Report of Forty-four Cases, Together with a Report of a Case in which Antipyrin Was Used. George R. Fowler.

3 *Intraspinal Cocainization for Surgical Anesthesia. S. Ormond Goldan.

4 *Analgesia in Obstetrics Produced by Medullary Injections of Cocain. S. Marx.

5 *Anesthesia in Children with Adenoids, and in the Adenoid Operation, with Special Reference to the Dangers of Chloroform in Children of the Lymphatic Diathesis. T. H. Halsted.

6 Large Scrotal Hernia: Operation for Radical Cure Under Special Anesthesia with Eucain; Aluminum Bronze Wire Used for Buried Sutures; Operative Recovery; Death from Exhaustion and Urinary Sepsis. W. W. Keen.

7 Anesthesia by Cocainization of the Spinal Cord. George G. Hopkins.

8 Subarachnoidean Injections of Cocain as a Substitute for General Anesthesia in Operations Below the Diaphragm, with Report of Seven Cases. Edward Wallace Lee.

9 Two Cases of Medullary Narcosis. W. L. Rodman.
10 Cocain Anesthesia of the Spinal Cord. Ernest La Place.
11 *Subarachnoid Injections of Cocain as a Substitute for General Anesthesia. A. M. Phelps.
12 *A Note on the Use of Nitrous Oxid and Ether as an Anesthetic. Thos. R. Brown and Howard A. Kelly.
13 *Ethyl Bromid in Obstetrics and Gynecology. Wilmer Krusen.

New York Medical Journal, November 3.

14 An Operation for Laceration of the Perineum; Failure of Medullary Narcosis. Herman J. Boldt.
15 *Fulminating Appendicitis. Charles A. Wheaton.
16 *The Modern Cesarean Section, an Ideal Method of Treatment for Placenta Previa. A. Palmer Dudley.
17 A Southern Health Resort: Climatic Advantages of Asheville, N. C., as a Temporary Residence for Tuberculous Patients. B. T. Whitmore.
18 A Case of Paralysis of the Recurrent Laryngeal Nerve; Recovery. John F. Culp.
19 Supposed Glioma of the Retina; Enucleation; No Return in Twelve Years. David Webster.
20 A Case of Sudden Death Probably Due to Pulmonary Embolism. J. Shelton Horsley.

Medical Record (N. Y.), November 3.

21 *Modern Quarantine in Its Relations to Passengers, Crew, and Cargo. Alvah H. Doty.
22 *Incineration vs. Earth Sinks and Chemical Disinfection. William G. Bissell.
23 *Some Cases of Acute Appendicitis. Alexander B. Johnson.

Boston Medical and Surgical Journal, November 1.

24 *Gunshot Injuries by Rifles of the Reduced Caliber. Louis A. LaGarde.
25 *Purpura Hemorrhagica, or Morbus Maculosus of Werlhof. Stephen S. Burt.
26 *A Note on Rectal Feeding in Peptic Ulcer. George G. Sears.
27 *Phthisis: Some Causes of Failure in Its Climatic Treatment. Will Howard Swan.

Medical News (N. Y.), November 3.

28 *Treatment of Puerperal Eclampsia. J. B. Killebrew.
29 *Observations Upon the Quartan Malarial Parasite and Upon the Staining Reactions of the Tertian, Quartan and Estivo-Autumnal Parasites. Charles F. Craig.
30 *Is Living Animal Tissue Capable of Neutralizing the Effects of Strychnin and Venom? An Experimental Study. S. J. Meltzer and G. Langmann.
31 *Eye-Work in General Practice. S. W. S. Toms.
32 *Present Status of Interstate Reciprocity Concerning Licenses to Practice Medicine. Emil Amberg.

Cincinnati Lancet-Clinic, November 3.

33 *Subcutaneous Injection of Alcohol in Saline Solution. J. Rilus Eastman.
34 *Constipation. George J. Monroe.
35 Case Reports. M. L. Heidingsfeld.

St. Louis Medical Review, October 27.

36 President's Address before Medical Association of Missouri. Walter B. Dorsett.
37 The Medical Practice Act, Proposed by the Committee of the Missouri State Medical Association. E. L. Priest.

November 3.

38 Address in Surgery before Missouri Medical Association. W. A. McCandless.

Medical Fortnightly (St. Louis, Mo.), October 25.

39 Cophosis: Defective Hearing. O. F. Baerens.
40 *Diagnosis of Tumors of the Spinal Cord and Its Membranes. Frank P. Norbury.
41 Diseases of the Lungs and Pleura. (Continued.) Albert Abrams.
42 The Medical Treatment During the Adolescent Period. Edwin Rosenthal.

Pediatrics (N. Y.), October 15.

43 The Treatment of Scarlatinal Nephritis. (Continued.) Robert C. Kemp.
44 *The Diagnostic Importance of the Meningococcus Intracellularis. Louis Fischer.

Alienist and Neurologist (St. Louis), October.

45 The Employment of Physical Methods in the Treatment of Nervous Diseases. (To be continued.) Aug. Hoffmann.
46 Simulation of Organic Disease of the Nervous System by Hysteria. Prof. Von Krafft-Ebing.
47 Sexual Pervert Impulses and Obsessions. Paul Garnier.
48 The Influence of Age Upon the Production of Nervous Diseases. William C. Krauss.
49 Puberty Psychoses. Jules Voisin.
50 The Legal Disabilities of Natural Children Justified Biologically and Historically. (Continued.) E. C. Spitzka.
51 *Can Syringomyelia Be Diagnosed Ante-Mortem. Arthur E. Mink.
52 *The Brain and Nerve-Destroying Policy of Railways. C. H. Hughes.

St. Paul Medical Journal (Minn.), November.

53 William and John Hunter and the Medicine of Their Time. Burnside Foster.
54 *Fulminating Appendicitis. Charles A. Wheaton.
55 Pregnancy and Heart Disease. George G. Sears.
56 The Influence and the Demand of Science Upon Medical Education. R. O. Bearr.
57 Ophthalmia Neonatorum, Prophylaxis. Frank Todd.

American Gynecological and Obstetrical Journal (N. Y.), October.

58 *The Consideration of the Methods of Hemostasis in Abdominal Surgery. E. E. Montgomery.
59 Varicose Veins of the Vulva Complicating Pregnancy: Dermoid Cysts. Wilmer Krusen.
60 A Case of Supposed Urethral Traumatism. Henry B. Stehman.
61 Treatment of Adherent Cysts of the Ovary and Broad Ligament by Incision and Drainage: Report of a Case. J. E. Allaben.
62 *Curage; Two Advantages It Possesses over Curettage. Frank A. Stahl.

Louisville Monthly Journal of Medicine and Surgery, November.

63 Empyema of the Antrum of Highmore. Adolph O. Pfingst.
64 Asepsis in Labor. Edward Speiden.
65 Excision of Joints. J. Lively Johnson.
66 A Report of Surgery. (Continued.) H. Horace Grant.

American Journal of Obstetrics (N. Y.), October.

67 *The Prevention and Treatment of Postpartum Hemorrhage. John W. Byers.
68 *Spina Bifida. W. Reynolds Wilson.
69 Vaginal Hysteromyomectomy and Morcellation of the Myomatous Uterus. O. Theinhaus.
70 Chronic Constipation of Infants and Young Children. George W. Cook.
71 *The Objections to Symphyseotomy and How to Overcome Them. William P. Carr.
72 An Indication for Symphyseotomy. Henry D. Fry.
73 Complete Laceration of the Perineum in Young Girls. J. Wesley Bovée.
74 *Compression of the Ureters in Myomata Uteri. J. H. M. Knox, Jr.
75 Hysterectomy. William F. Metcalf.
76 A Large Pelvic Extraperitoneal Hematocele Following Dilatation of the Cervix and Curettage. Eugene R. Corson.
77 The Origin of Ovarian Cysts. Mary Dixon Jones.

Obstetrics (N. Y.), October.

78 Obstetrics in Paris. N. I. Ratchinsky.
79 Difficult Labor Caused by Dropsy of the Child. Carl Weidner.

Buffalo Medical Journal, November.

80 Introductory Lecture to the Course at the Medical Department of the University of Buffalo, 1900-1901. Eugene A. Smith.
81 *Immunity in Tuberculosis. A. D. Lake.
82 *An Inquiry Into the Existence of Autochthonous Malaria in Buffalo and Its Environs. Irving P. Lyon and Alfred R. Wright.
83 Several Glimpses Mostly Medical of Lands Across the Seas. Francis Eugene Fronczak.
84 Obstetrics Viewed from a Gynecologic Standpoint. Charles E. Congdon.

Cleveland Journal of Medicine, September.

85 Stricture of Esophagus. F. E. Bunts.
86 Obstruction of the Esophagus. H. W. Rogers.
87 Results of Operative Procedures for Mechanic Obstruction at the Pylorus. N. Stone Scott.
88 Acute Intestinal Obstructions. C. B. Parker.
89 Symptoms of Chronic Intestinal Obstruction. C. A. Hamann.
90 Gall-stones as Intestinal Obstructions. John H. Lowman.
91 Malignant Disease Giving Rise to Intestinal Obstruction. Dudley P. Allen.
92 Obstruction of Sigmoid and Rectum Due to Intrapelvic Disease. M. Rosenwasser.
93 Obstruction of Sigmoid and Rectum Due to Intrapelvic Disease. Wm. H. Humiston.
94 Intrarectal Obstruction. Thos. Chas. Martin.

Quarterly Journal of Inebriety (Hartford, Conn.), October.

95 *A Study of Cases of Inebriety. Geo. E. Partridge.
96 The Physiologic Chemistry of Alcohol. Henry F. Hewes.
97 Alcoholism. H. L. Staples.
98 The Effect of Alcohol on the Nervous System in the Light of Recent Scientific Research. W. H. Riley.
99 *Mental Suggestion as an Aid in the Treatment of Morphinomania. Samuel H. Green.
100 Damage of Daily Use of Alcohol. C. H. Hughes.
101 *Delirium Tremens in Moderate Consumers of Alcohol. Frank H. Pritchard.

Medical Sentinel (Portland, Ore.), October.

102 A Plea for More Care in the Early Diagnosis of Cancer. J. B. Eagleson.
103 Some Needs of Hospitals for the Insane. W. H. Anderson.
104 Report of a Case of Persistent Sciatica Treated by Celiotomy and Suspension of the Uterus. J. W. Bean.

The Medical Bulletin (Philadelphia), October.

105 *A Simple and Effective Treatment of Dyspepsia. J. M. McLeod.

106 The Use of Protargol in the Treatment of Venereal Ulcers. Hiram Williams.
107 Acute Sphenoidal Sinusitis Terminating in Fatal Suppurative Meningitis and Diagnosticated only at the Autopsy. J. Toubert.
108 Case of Capillary Bronchitis cured by the Passive Inhalation of Nascent Chlorid of Ammonia. Ephraim Cutter.

Austin Flint Medical Journal, (Mason City, Ia.), October 15.

109 *Light as a Remedial Agent in the Treatment of Tuberculosis. J. W. Kime.
110 Treatment of Pleural Effusions. William Jepson.

Brooklyn Medical Journal, November.

111 *Torticollis. Walter C. Wood.
112 *Tubercular Peritonitis. George McNaughton.
113 Tubal Gestation. Edward D. Ferris.

Southern Practitioner (Nashville, Tenn.), November.

114 The Molecule. Thos. L. Maddin.
115 Corneal Ulcer. F. Clawson.
116 Blood Cure of Chronic Gastric Catarrh. T. J. Biggs.

St. Louis Medical and Surgical Journal, November.

117 Pre-Columbian Lupus (Uta) and Its Surgical Treatment by Amputation of Nose and Upper Lip, as Represented on the Huacos Pottery of Peru. Albert S. Ashmead.
118 Splenic Anemia—Case—Blood Cured. T. J. Biggs.
119 A Case of Leucoderma of Leprosy in a Japanese Subject. Albert S. Ashmead.
120 Some Scintillating Features Regarding the Therapeutics of Eczema. Wm. Hooker Vail.

The Stylus (St. Louis, Mo.) October.

121 Syphilitic Gummata of Spinal Cord Treated Successfully by Very Large Doses of Iodid of Potash. Francis W. Campbell.
122 The Physician's Vaster Empire. John Hunter.
123 An Interesting Case of Phlebitis. R. E. Donnell.
124 Report of a Case of Tetany. Alexander Hunter.

The Laryngoscope (St. Louis, Mo.) October.

125 Primary Epithelioma of the Antrum of Highmore. H. Holbrook Curtis.
126 Report of a Case of Spontaneous Cure of a Severe Mastoiditis. H. S. McGavren.
127 Carcinoma of the Larynx—Laryngectomy. Joseph S. Gibb.
128 Primary Carcinoma of the Larynx—Report of a Case. T. H. Farrell.
129 Report of a Case of Tic Douloureux. F. H. Koyle.
130 Cerebral Abscess Following Chronic Otitis Media Purulenta—Operation—Recovery. William H. Dudley.
131 *Treatment of Hay-Fever. Seth Scott Bishop.
132 *Some Observations Upon the Common Diseases of the Throat and of the Naso- and Oro-Pharynx. Gilbert D. Murray.

Carolina Medical Journal (Charlotte, N. C.), October.

133 Epiphora; Lachrymal Abscess; Congenital Absence of Lachrymal Puncta—Stricture of the Lachrymal Duct. L. Webster Fox.
134 Criminal Abortion—Medico-Legally Considered. (To be concluded.) J. D. Roberts.
135 Surgical Methods as Practiced in the Country. William H. Hudson.
136 Tuffier's Method of Intra-Spinal Analgesia—Report of Case. T. P. Whaley.
137 Reflected Pin in Appendicitis. H. S. Lott.
138 Notes of the Surgical and Gynecologic Clinics in Berlin. H. A. Royster.

Charlotte Medical Journal, October.

139 *Suggestions for the Care of the Nose. E. R. Russell.
140 Exploratory Incisions; Their Relation to General Practice. W. O. Spencer.
141 The Use of Suprarenal Extract in Diseases of the Nose and Throat. Seymour Oppenheimer.
142 Pseudo (?) Smallpox. Jno. R. Rose.
143 Bacterial and Autointoxication in Health and Disease. Paul Paquin.
144 Subarachnoid Injection of Cocain. J. E. Massey, Jr.

Georgia Journal of Medicine and Surgery (Savannah), October.

145 Some Remarks on the Etiology and Treatment of Diabetes Mellitus. Louis W. Bishop.
146 Tuberculosis of the Knee-Joint—A Clinical Lecture. Daniel W. Marston.
147 *Treatment of Cancer of the Cervix of the Uterus Complicated by Pregnancy. George Ben Johnston.
148 *On the Pharmacopeial Recognition of Diphtheria Antitoxin. Joseph W. England.

AMERICAN.

1. **Local and Regional Anesthesia.**—Matas' paper is a valuable historical and critical review of the methods of regional anesthesia as employed in surgical practice, including the subarachnoid method. He gives full credit to Corning, Halsted and others as pioneers in the local use of cocain. He describes the methods at length, illustrating the different operations for regional infiltration, etc., and reports cases in his own practice, which has been extensive with these methods. He considers anesthesia with cocain or its allies most often impracticable and unsatisfactory in the following conditions: 1. All operations or manipulations in which complete muscular relaxation is required to accomplish the object of the intervention; as in the reduction of fractures and dislocations of the larger bones and joints—the hip, the shoulder, the elbow, and the knee—in relaxing ankylosed joints, spastic muscular contractures; stretching sphincters—of the rectum and bladder—etc. 2. In all extensive atypical operations on the head and trunk in which the neuro-regional method is inapplicable and the field of the operation can not be well defined or circumscribed, as in the radical extirpation of mammary cancer by Halsted's and Meyer's methods; in the extirpation of bilateral and multiple chains of adherent lymphatics in tuberculosis of the neck, etc. 3. In all atypical operations involving prolonged and complicated maneuvers in the splanchnic cavities, especially when the organs operated upon are adherent and inflamed. 4. In all operations upon patients whose emotions are beyond the control of reason or the will, as in the violently insane, in delirious patients, in children, in hysterical and extremely timorous patients, and in all those in whom the mere consciousness of the operative act—without physical pain—is sufficient to produce great mental excitement and distress. In spite of these he says the number and character of the cases in which the most rebellious conditions can be brought under the domain of the new technic by a patient, tactful and skilled operator is astonishing. Spinal cocainization is considered at length, and its advantages and disadvantages discussed. The author's personal experience, begun in 1899, has been limited to nine cases and shows very little objection to this method. Judging from this, he would limit its indications for application for the present: 1. To adults, and to reasonable persons who have good self-control, thereby excluding children, hysterical patients, and the insane. 2. To patients in whom the methods of local or regional anesthesia are inapplicable. 3. To patients suffering from emphysema, advanced asthma, chronic bronchitis, and other respiratory affections in whom a general inhalation anesthetic is absolutely contraindicated; in advanced cardiac cases with degenerative lesions, he would fear the possible depressing effects of the injection and excitement on the circulation. 4. In the majority of cases in which the painful part of the operation is not likely to be prolonged beyond one hour and a half, as he would be averse, in the preseht state of our knowledge, to repeat a second cocainization or to increase the total dose of the cocain to more than 2 cgm., especially in exhausted subjects. The danger of repeating the intradural injections to prolong the anesthesia is also one of the objections to the use of the method in ordinary labor. But its advantages in instrumental cases, as shown by the successful experiences of Dupaigne, of Louviciennes, France—who, according to Tuffier, first applied the subarachnoid method in labor, January, 1900—and of Bumm and Kreis, of Basle; of Doleris and Malartic, of Paris; and Marx, of New York, can not be doubted, especially in nephritic patients.

2. **Cocain Analgesia.**—Fowler reports forty-four cases of which he gives a brief résumé and one case in which antipyrin was injected. The analgesia in this case did not seem to have been quite complete according to the author's belief and there was nausea, vomiting, headache, acceleration of pulse and rise of temperature quite up to the average of this operation in connection with spinal cocainization. In certain cases Fowler employed also ether or chloroform anesthesia where the analgesic effect was not sufficiently prolonged and in special disturbances no bad effects were noticed and rather less of the anesthetic than usual was required.

3.—See abstract in THE JOURNAL of November 3, p. 1172.

4. **Analgesia in Obstetrics.**—The report by Marx is a general one of his experience with medullary injections of cocain in obstetric practice. He thinks the usual precautions for asepsis are the same as in abdominal operations, and remarks that he has seen the analgesia from the ears down, but in most cases it extends only to the umbilicus. The analgesia from one injection lasts from one to five hours, and

he has never met with any serious symptoms in labor such as are actually seen in surgical work. There was no failing pulse and cyanosis. The use of certain drugs has given such excellent results that, barring a very short vomiting and headache, he never sees any of the distress he was formerly accustomed to. The drugs which he relies on are the bromids, hyoscin hydrobromate and nitroglycerin, and he thinks it well to have the stomach of the patient emptied some time prior to the expected puncture. His best success has been in those cases where 30 to 40 grains of sodium bromid were given one to two hours before. Only when this fails does he allow the use of hyoscin hydrobromate in 1/100 to 1/200 of a grain, given in the anesthetic areas. Nitroglycerin he usually reserves until slight cyanosis becomes apparent and the pulse fails. He gives it also hypodermically in 1/25 to 1/100 of a grain doses. Uterine contractions are not interfered with. He does not hesitate to use repeated injections. He says he has carried a woman through a labor of eight hours by repeated injections, with practically no pain. A special point noticed is the ease with which the cervix can be dilated when the patient is cocainized. He is careful to avoid any psychic exhaustion, and therefore insists on quiet, blindfolding of the eyes and plugging the ears of the patient.

5. **Anesthesia in Adenoids.**—The following are the conclusions of Halsted's article: 1. Children with adenoids present two distinct conditions, viz., the lymphatic diathesis, manifesting itself locally in the nasopharnyx, and the constitutional and local effects of mouth-breathing. 2. Mouth-breathing children and those of the lymphatic diathesis are in depressed general health and possess a lowered general tone of all the cells and organs of the body and so resist badly all heart depressants, such as chloroform, shock, fright, etc. 3. Instead of being regarded as comparatively safe during the period of childhood because of the existence, among so many children, of the lymphatic diathesis; the presence of this diathesis is a positive contraindication to the use of chloroform in any operation. 4. The adenoid operation in children under 12 years of age without general anesthesia must as a rule be condemned because it does not permit of a thorough removal of the growths, is exceedingly painful, and because the pain and loss of blood produce such shock that irreparable injury is often done to the nervous system of a sensitive child. 5. For the removal of adenoids, ether properly administered is incomparably safer than chloroform, and in skilled hands is but little more disagreeable to the patient, and in the great majority of cases is the best anesthetic in this operation.

11. **Subarachnoid Injections of Cocain.**—Phelps notices the enthusiasm in regard to medullary anesthesia and gives special caution not to progress too fast.

12. **Nitrous Oxid and Ether.**—Brown and Kelly mention the advantages of the combined method of using nitrous oxid with the Bennett inhaler, followed by ether, and have been using it in all cases operated on during the last eight months in Dr. Kelly's private hospital. It seems to possess so many advantages to the patient, operator and anesthetizer and so few disadvantages that it has become a distinct part of the operative technique.

13. **Ethyl Bromid.**—The uses of ethyl bromid are detailed briefly by Krusen, who specially mentions the need of thorough examination of the patient before anesthetizing and the employment of a pure drug. The advantages which are claimed for this agent are: 1, the short space of time required to render the patient unconscious; 2, the small quantity of the drug employed and the rapidity of its elimination from the system; 3, the simplicity of its administration, no cumbersome apparatus or inhaler being required, and 4, the comparative freedom from unpleasant sequels, such as headache, nausea, vomiting, etc., which characterize the other more popular anesthetics.

15.—See abstract in THE JOURNAL of October 20, p. 1049.

16. **Cesarean Section.**—Dudley pleads for Cesarean section in placenta previa as being a comparatively harmless and efficient method of saving two lives instead of risking one or both. He claims that it is practically free from danger if properly performed. By the latter condition he means that an ante-partum diagnosis justifying the operation shall have been made, proper asepsis employed and the operation done before the patient has become in any way exhausted.

21.—See abstract in THE JOURNAL of November 3, p. 1170.

22. **Incineration vs. Earth Sinks.**—The disposal of camp refuse, especially the excreta, is an important matter, as shown by experience in the late Spanish-American war with typhoid fever. Bissell describes and illustrates an incinerator used by the National Guard of New York in their encampment in 1899 and the excellent results obtained. He gives the testimony of those who have observed its action and advocates its more extensive use.

23. **Acute Appendicitis.**—Johnson reports forty cases of appendicitis operated on during a period of a little more than a year and calls attention to certain special points, especially the value of abundant saline irrigation of the peritoneal cavity through a moderate incision and without evisceration, in cases of purulent peritonitis.

24. **Military Gunshot Wounds.**—This article of La Garde's reports the results of observations on the wounds received in the Santiago campaign. He thinks that the Mauser bullet apparently has sufficient stopping power for the purpose of war, as the men who were hit almost invariably fell back at once. The terrific explosive effects were not observed, but he accounts for it by the fact that the fighting was done in a country covered with bushes and the bullets necessarily lost much of the velocity through obstructions. This also accounts for the large number of lodged bullets—10 per cent. The flesh wounds were comparatively slight and the experience in the Santiago campaign does not confirm the apprehensions as to hemorrhage produced by small jacketed bullets. The gunshot injuries of the diaphyses of the bones, as a rule, were not attended with much comminution, and in the joints perforations were usually clear-cut. More than one-half of the injuries to the head ended fatally; about one-fourth of those of the thorax recovered—a favorable showing. After-effects, however, have been noted, and this must be considered. Gunshot wounds of the abdomen were very fatal and laparotomies invariably so. He gives a tabulated comparison of the effects of the new arm as compared with the conclusions based on the results of many deaths with the old weapons, showing the larger percentage of wounds of the extremities in modern war.

25. **Purpura Hemorrhagica.**—This disorder is discussed by Burt, who describes the symptoms and notices its frequent fatality and gives histories of cases. He considers it a bacterial disease. It is especially liable to affect young children and pregnant women and is rather less frequent in the male than in the female. It is treacherous in its course; it may commence mildly and be converted very suddenly into a really dangerous disorder. The results of medical treatment are not especially favorable, and certainly not in the virulent forms. In conclusion he gives extracts from Flügge's "Die Mikroorganismen," showing the bacteriologic findings.

26. **Rectal Feeding in Peptic Ulcer.**—Two cases are reported by Sears which seem to show that nutrient injection of peptonized food is a valuable method in gastric ulcer. The tube is inserted beyond the sigmoid flexure if possible, at least eight or twelve inches inside the rectum, and the fluid injected slowly. Efforts at expulsion are prevented by a pad and the enemata are repeated every six hours. He does not claim that all the necessary nourishment can be furnished this way, but in his cases the improvement of the patient by this method was encouraging.

27. **Climatic Treatment of Phthisis.**—Swan points out the factors acting to produce the many failures to receive benefit from the Colorado climate. They are, the advanced stage of the disease at which many patients seek this change, the poverty which requires them to work, and often at damaging occupations, when they should rest, and their neglect of

the proper methods of living. He urges three points: 1, do not send patients with far-advanced phthisis to Colorado, unless they are able to make the change without serious fatigue, and unless they can live there in the manner they should and for a prolonged period; 2, do not send early cases, unless there are assured means for proper hygienic living for a period sufficiently long to get the patient well enough to earn, in part at least, his living, and to find employment. How long will depend on the individual case and his progress, but, roughly speaking, three or four months at least. There are many openings for employment, but more people looking for the desirable ones, and 3, most important of all, instruct the invalid to rest and keep quiet after his arrival until some one competent to advise him considers it safe to begin to exercise; and then have his manner of life and hygiene directed from time to time, according to his progress and condition.

28. **Puerperal Eclampsia.**—After first noticing the cause and assuming that eclampsia is due to an accumulation of toxins in the system, produced in the body, Killebrew concludes that one of the best methods of treatment is to dilute the toxins as much as possible and at the same time to increase the activity of the excretory organs by the use of normal salt solution. The pregnant woman, he says, should be under constant observation by her physician, at least after the sixth month. If there are any premonitory symptoms of toxemia such as disturbance of vision, epigastric pain, nausea, mental irritability, etc., it is a strong indication that toxemia is present. She should be kept quiet, put on a liquid diet, largely of milk, and the bowels looked after carefully; she should also have a daily warm bath with an hour or more of rest in bed and hot enemata of one to three pints of normal salt solution once or twice in every twenty-four hours. If, in spite of this, the symptoms progress, or if convulsions have occurred when the patient is seen active measures must be taken; excepting in very anemic cases, he advises bleeding. While the dark toxin-laden blood flows from the distal end of the divided vein, normal salt solution at a temperature of about 100 F. is injected into the proximal end. Intravenous injection is preferable to other methods as being more certain and rapid and not more dangerous. If the patient is edematous and the circulation is sluggish, salt solution under the skin is probably never taken up by the lymphatics. The uterus should be emptied immediately. After these measures have been taken the colon should be thoroughly irrigated, and if convulsions recur they should be controlled with chloral given in an enema, and if they again become severe another infusion of normal salt solution should be given, but this rarely will be necessary. During convalescence the patient should be kept in bed and the bowels and other excretory organs kept active. The diet should be restricted to liquids for a week and then gradually increased as deemed best. Hot saline enemata should be given twice daily. All excitement, worry, depression and callers should be avoided. Other drugs than chloral are not especially favored by the author.

29. **The Malarial Parasite.**—Craig describes the staining reactions of the different forms of tertian, quartan and estivo-autumnal parasites in malaria. For staining he uses either Romanowsky's or Chenzinsky's method, preferably the latter. The former is a mixture of equal parts of saturated methylene-blue and 1 per cent. aqueous eosin solutions. The latter is somewhat similar, but in different proportions; a concentrated watery methylene-blue solution, diluted one-half with water, is added to an equal amount of a .5 per cent. solution of eosin in 60 per cent. alcohol.

30. **Animal Tissue and Poisoning.**—Meltzer and Langmann report experimental studies of the effects of animal tissues on certain poisons, such as snake venom and strychnin. Their results can be briefly summarized as follows: Constriction of an extremity of an animal, even after removal of the constriction, markedly retards the fatal outcome of snake-poisoning and transforms an effective minimum dose of strychnin into an ineffective subminimum dose. This effect is apparently due to some impairment of the power of absorption within the constricted leg. It seems quite certain that no part of either poison becomes fixed or neutralized by the tissues of the animals experimented on. The claim of v. Czyhlarz and Donath to that effect could not be sustained.

31. **Eye-Work in General Practice.**—Toms calls attention to the ocular conditions producing reflex symptoms, such as anorexia, vomiting, vertigo, gastro-intestinal disturbances, etc., and cites cases illustrating his views. He says in conclusion that it is apparent that there are many cases presenting nondescript ailments due to some latent irritation to susceptible nervous centers, capable of reflecting impressions to organs easily deranged, that are indirectly dependent on abnormal conditions of congenital eye defects in refraction or muscular unbalance. He does not assume that general practitioners can become experts in the detection of the obscure etiology of these conditions, but they should be able to do more than is sometimes done at the present.

32. **Interstate Reciprocity.**—Amberg continues his paper, giving the statements of the officials in various states of their desires and standing in regard to medical reciprocity, and suggests that all local medical societies appoint committees to settle the question, and that the various state and territorial medical societies appoint a certain committee which should be in touch with the committees of the local societies, and also a committee to be appointed by the AMERICAN MEDICAL ASSOCIATION or its Section on State Medicine. The latter should be in constant touch with the committee of the National Confederation of the State Medical Examining and Licensing Boards. He also thinks it would be advisable that the certificates of the medically strong states be accepted by the weaker states and territories without the stronger accepting the certificates of the weaker. The medical profession will not cease in its efforts until the point is reached when the title of M.D. in any place in the United States gives a guarantee that the bearer has complied with the requirements of the present state of medical science.

33. **Subcutaneous Injection of Alcohol.**—Eastman suggests the use of a small amount of alcohol in normal saline solution in certain cases where a direct cardiac stimulant is required. He has found the salt solution containing whisky more prompt and certain in its results than the plain physiologic salt solution. The pulse was distinctly reduced in rate and increased in force by the use of the combination in a case of serious toxemic and fulminating appendicitis, and he suggests it as worthy of a further trial.

34. **Constipation.**—The general subject of constipation is reviewed by Monroe, who considers it less an actual than a relative disease. While normally there should be a passage of the bowels once in twenty-four hours, there are exceptions to this rule. He mentions one of a man who lived to the age of 77 in good health up to within two years of his death and yet who defecated only about twice a month. The causes are noticed: sedentary habits, bad air, strictures, tight-lacing, etc. He thinks the continued use of oatmeal, especially in those of sedentary habits and in the aged, will produce this condition, and another cause is the use of large enemas, the frequent repetition of which paralyzes the muscles of the rectum. The various symptoms of the condition are also noticed—mental depression, headache, intestinal obstruction, nervousness, hemorrhoids, etc.

40.—See abstract in THE JOURNAL, xxxiv, p. 1334.

44. **Meningococcus Intracellularis.**—The special point of Fischer's article is the comparatively more favorable prognosis with the meningococcus than with other forms of infection in the meninges and the value of lumbar puncture as a diagnostic method of determining its presence. His own experience with this procedure as a therapeutic measure has been rather favorable, as it also enables him to give a better prognosis when the meningococcus has been found.

51. **Syringomyelia.**—Mink argues for the impossibility of an absolute diagnosis of syringomyelia during life, claiming that many cases have been wrongly diagnosed, as shown by post-mortem and that in others the reports have been with-

held for this reason. In enumerating the different troubles that may be confounded with it, he mentions hysteria, leprosy, tabes, bulbar palsy, etc., and concludes that the diagnosis is impossible during life with reasonable certainty, for the following reasons: 1. It has no definite symptomatology. 2. In some cases it has no symptomatology at all. 3. The so-called syringomyelic dissociation of sensation upon which so many diagnoses have been based is not characteristic of syringomyelia, as it occurs in many central nervous diseases and is lacking in quite a few cases of syringomyelia. 4. Dissociation of sensation is, to a certain degree, a normal condition. 5. There are no special symptoms or groups of symptoms characteristic of syringomyelia alone. Comparatively few cases diagnosed during life have been confirmed by post-mortem examination, e. g., cases by Raymond, in France, and Dercum, in this country, but they are so few in number compared with cases unverified or contradicted by post-mortem examination or unsuspected until then that they appear to be of the nature of "lucky strikes."

52. **Railroads and Overwork.**—Hughes protests against the policy of railroads in demanding long hours of specially trying work, including in those thus overtaxed not only the subordinates and train dispatchers, but also higher officials. The human brain is a limited machine, its limitations should be recognized as much as those of the machines of the shop and road.

54. See abstract in THE JOURNAL of October 20, p. 1049.

58. **Hemostasis in Abdominal Surgery.**—The difficulties of the various methods of hemostasis in abdominal surgery are noticed by Montgomery, who concludes that the angiotribe supplemented by the ligature is probably the best method. In catgut properly prepared we have a ligature which is capable of absorption and yet may remain sufficiently long to insure the patient against hemorrhage. The angiotribe prepares a groove in which the ligatures may be placed. He prefers the catgut prepared by his own methods for safety.

62. **Curage.**—Stahl emphasizes the advantages which the finger has over the curette in locating foreign bodies and its superior facility in shelling out intact the secundines instead of the usual morselling by the curette and forceps. He claims that he has never yet met a uterus whose fundus he can not reach and whose cavity he has been compelled to curage a second time for retention. The index finger can not be used so well, but the middle finger can, and he illustrates his method.

67. **Postpartum Hemorrhage.**—After first noticing the pathology, etc., of postpartum hemorrhage Byers insists on two measures which should be adopted in every case for its prophylaxis: 1. The proper management of the third stage of labor. 2. The important principle never to deliver in the absence of pains. He advises waiting patiently for the separating of the placenta, avoiding all efforts to massage or stimulate the uterus. As regards the second point, he insists on that no matter how tired the physician may be or how tedious the labor, he must avoid doing anything when pains are absent. The proper method is to give a dose of opium, when the patient will fall asleep, and after sufficient rest the pains will reappear and she will probably be able to complete the birth without the forceps. As regards the treatment postpartum, he thinks the best method is the external uterine massage. The introduction of the hand into the uterus is a very dangerous procedure, and should de done only when it can not possibly be avoided. He would use hot water in cases where uterine massage fails. In case both of these fail, bimanual compression should be made, though he thinks this very fatiguing and trying. He describes the technique of gauze plugging, and where in spite of such packing, hemorrhage continues, he would recommend drawing the uterus down as far as possible, which he thinks acts by kinking and compressing the uterine arteries. Injection of iron has not been used by him for the past five years; it is not without danger and interferes with subsequent measures. The sources of hemorrhage are mentioned, especially lacerations and their treatment.

68. **Spina Bifida.**—Wilson's article is an elaborate treatise on the whole subject of spina bifida and its operative treatment. Palliative measures he thinks may be successful, but the possibility of spontaneous cure must not be forgotten. The special technique of removal of the tumor and closure is described, and he mentions the risks of the proceeding.

71. **Symphyseotomy.**—The dangers of symphyseotomy, according to Carr are: 1. Dangers from anesthesia and from shock, which are unavoidable. 2. Danger from infection, which is unnecessary but real. 3. Danger of attempting it in unfavorable cases where the pelvis is too small. He goes at some length into the discussion of this subject. 4. Danger of lacerating the bladder or uterus or the sacro-iliac ligaments. This can be avoided by insuring not over two and a half inches separation in all cases, and there will then be no laceration of tissues excepting some peeling off of the periosteum. 5. Danger of hemorrhage from rupture of the anterior vesical veins or those of the clitoris. Usually this may be checked by gauze packing, but may be entirely obviated by separating the tissues carefully all around the symphysis and for three-quarters of an inch to one inch on each side of the median line. 6. Danger of sepsis, and he insists on special antiseptic precautions, using 1-2000 bichlorid solution freely. 7. Discomforts and dangers that may follow from the imperfect methods of coapting the bones which he thinks can be obviated by wiring the joints. This should be done in every case. The two cases he reports are not enough to base an opinion upon, but they show that wiring the bones does not necessarily produce any bad results. The contrast between the cure where wiring was used and that where it was not is most marked, and until this becomes part of the operation, symphyseotomy will not meet with general favor.

74. **Compression of the Ureters by Myomata Uteri.**—The conclusions of Knox' article are given as follows: 1. Some compression of the ureters is produced by a large proportion of all large myomatous uteri. 2. The resulting hydroureter and hydronephrosis may continue for years and give rise to no discomfort to the patient. 3. The presence of a dilatation of the ureter and renal pelvis, however slight, lowers the resistance of these organs to toxic and infectious agents, and hence inflammatory conditions of the ureter and kidneys not infrequently follow ureteral compression. 4. In all instances of uterine myomata, the possibility of urethral involvement must be considered. When such a condition is suspected, every effort should be made by means of direct examination, urethral catheter, etc., to arrive at an accurate diagnosis. 5. Exploratory incision is occasionally justified to establish a diagnosis. 6. The ureters should be inspected whenever the abdomen is opened for the removal of a tumor. 7. A myomatous mass found to be existing under pressure upon one or both ureters should be removed, if possible, unless operative interference is contraindicated. Such serious sequelæ of ureteral compression as extreme hydronephrosis, pyelonephorsis, etc., should receive appropriate treatment.

81. **Immunity in Tuberculosis.**—From a study of the cases in a special locality and among the tribe of Indians of the Cattaraugus Reservation, Lake finds a very large mortality from tuberculosis, but he has come to the conclusion from his studies here and elsewhere that early tuberculosis in the form of scrofulous engorgements, etc., seems to confer a certain degree of immunity to later pulmonary infection. The same protection seems to be conferred in tuberculosis of the bones and joints. He observes that the development of phthisis at puberty is a common occurrence in the special population where it has been here studied, but those who have undergone extensive glandular tuberculosis with suppuration appear to escape. He thinks that with very few exceptions the whole population of the reservation may be divided into two classes: 1. Those who manifest existing tuberculosis. 2. Those who have suffered from the affection as shown by scars, deformities, etc., and have become the most vigorous men and women of the tribe. Recoveries from this, like other contagious diseases, appear to protect against a second invasion.

82. **Autochthonous Malaria in Buffalo.**—Lyon and Wright have endeavored to ascertain whether there is any such thing as locally-originating malaria in Buffalo. They have investigated the mosquito forms, finding no specimen here of the anopheles genus. Neither have they found any evidence that malaria originates in that particular locality. They do not pretend to have settled the question absolutely, but simply to have collected some facts and statistics and believe that only by such study as they have made can the true state of facts be ascertained.

95. **A Study of Cases of Inebriety.**—Partridge reports about twenty histories of drunkenness and calls special attention to the mental element in the cure of the habit. He finds that the craving is not for drink itself but for something it produces. There is a possibility of inebriety being self-limited, the tendency dying out at certain periods, generally in the climacteric period of life. Very few succeed in going right early, the average cure seems to come on between the age of 30 and 50, as he finds by reference to authorities and his own observations. If the physiologic basis for drinking is the change of protoplasm due to the continued assaults of alcohol, as many maintain, it will be difficult to account for the fact that young men are as a rule less easily cured than older ones. The social feeling is the most common cause of drinking.

99. **Mental Studies in Morphinomania.**—Green reports two cases of prisoners in the Georgia penitentiary, one who had been in the habit of taking over 400 grains and the other 380 grains of morphin daily. Both were treated by gradually diminishing the doses, keeping up the impression that they were taking the full amount by giving them quinin instead. The remarkable features of the cases were the reduction of 400 grains in the first case and 380 grains in the second case in about 70 days. At the same time a nutritive diet was insured, and no bad effects were observed excepting the rapid, nervous heart and pains in the limbs which disappeared like magic under the combination of digtalis, iron, quinin and suggestion.

101. **Delirium Tremens in Moderate Drinkers.**—Referring to a paper by Dr. Elmergreen, of Milwaukee, in the *Medical Times* in which he reports cases of delirium tremens in moderate consumers of alcohol, Pritchard concludes that the symptoms of delirium tremens, etc., are due in these cases to uremia coming from kidney disorders. His conclusions are stated as follows: 1. A renal disturbance is a constant accompaniment of uncomplicated delirium tremens. 2. The relation of time between the renal disturbance is an acute nephritis, which, as a rule, probably develops without any preceding chronic nephritis. 4. The course of the renal disturbance follows so closely, step by step, with the delirium that there is good ground for assuming that there is a genetic connection between the two phenomena. 5. There are so many similar points in the two states which are notoriously brought about by an insufficiency of the renal functions—uremia—and delirium tremens, that there is reason to assume that the delirium is an acute auto-intoxication-psychosis as a consequence of the insufficient kidney function, which is due to the acute nephritis. 6. The peculiar form that this psychosis takes on is dependent upon its developing in chronic alcoholics. 7. There is a probability that delirium tremens in pneumonia is dependent not on the pneumotoxins directly, but on the always present renal lesion. He says finally that he has examined the urine of quite a number of beer and whisky drinkers, and finds that when in average health their kidneys are not quite normal, the urine being thin with a slight trace of albumin, a little renal epithelium and occasionally casts if they are a little under the normal. If they take cold the condition is aggravated. He doubts whether the cases in delirium tremens were normal before the attack and whether the real insufficiency actually developed on such virgin soil as assumed by Hertz, who has studied the subject, in *Hospitals Tidende*, 1898, Nos. 8, 9, and 10.

105. **Dyspepsia.**—McLeod's paper is largely a recommendation of caroid as the most valuable single agent we have for the treatment of dyspepsia and since he has begun to use it, he has not been obliged to make elaborate examinations of the stomach-contents preliminary to treatment, reserving this for certain rare cases in which there are special reasons for knowing the exact chemical and other conditions existing in the stomach. Treatment by caroid without this procedure has been exceedingly satisfactory. Of course, the diet must be attended to as usual, especially the foods which produce troublesome symptoms. He seldom bars tea and coffee unless their use has been excessive. Excepting when special symptoms are particularly accentuated, these cases may be satisfactorily treated with a combination of caroid with charcoal and boric acid or sodium bicarbonate, which, in the form of tablets, is beneficial. If fermentation and excessive acidity are especially pronounced creosote in 3-gr. doses may be judiciously combined with caroid or thymol, or bismuth or larger doses of sodium bicarbonate according to individual needs. In atonic dyspepsia characterized by loss of appetite and in inability to digest foods, a combination of caroid with the usually employed bitter-tonics affords quick relief and in most cases permanent cure. He offers this paper not as a systematic study of dyspepsia but simply to emphasize the fact that this condition under ordinary rules can be satisfactorily treated without necessarily studying the exact chemical and pathological conditions existing in the stomach.

109.—This article has appeared elsewhere. See THE JOURNAL, October 27, ¶25, p. 1115.

111. **Torticollis.**—Eight different etiologic varieties of torticollis are enumerated here by Wood: 1. Torticollis of infancy due to the shortening of the sternomastoid muscles. He considers this torticollis usually due to hematoma, while some cases may be due to muscle rupture without a tumor. Some of these cases disappear without contraction following. He advises general massage with passive motion, with care to prevent tension of the contracted side. He would not hesitate to use a retention collar at night in a stubborn case. 2. Contractured cases in children, where in addition to the sternomastoid, the deep muscles, the scaleni and posterior group, have not developed their full length. These cases are amenable to surgical, mechanical and calisthenic measures, and a cure depends upon a correct appreciation of the amount of attention to be bestowed on each plan of treatment. He thinks all three are required, and advises to confine surgical interference to the sternomastoid, the platysma and the underlying fascia. The deeper structures should be thoroughly stretched until they cease to exert a force to pull the head back, but this should be done very carefully and slowly to avoid danger. After the manipulation he has used a slightly over-corrected position kept up by a plaster-of-Paris cast. 3. Muscular torticollis due to cervical muscular rheumatism, and if treated by the salicylates, Turkish baths and massage, easily cured in a short time. 4. Glandular torticollis due to inflamed cervical glands, the head being kept in position to relieve this. There are usually signs of infection. 5. Osseous torticollis with spasmodic contraction of the posterior groups of muscles due to reflex irritation from vertebral caries. These are generally treated for some months on a frame cot in the recumbent position, with head-extension applied by weight. Only after pain has ceased should any collar, brace, mask, or chin-cup be applied. 6. Cases due to ocular defects brought on by change of position to assist accommodation. The cause, of course, must be corrected. 7. Cases due to occupation. They may come on suddenly. These cases can generally be improved and cured by rest in bed combined with sedative and later tonic medication. Lastly he mentions the severe spastic cases, the cause of which he is inclined to think is cortical though the evidence as yet is meager. The only reasonable procedure is the division of the posterior branches of the upper cervical nerve-ends in addition to the older procedure by Gardner and Keen. There is some evidence that section of the muscle alone, if sufficiently radical, may cure these cases, and it seems to be proved by experiments and indicated by partial operations that paralysis of the head will not follow even if both posterior groups and both sternomastoid muscles are removed. The risks of the operation are

relatively not great; there has been only one death and that was due to erysipelas. As to cure, the statistics are not sufficiently positive as regards the final results.

112. **Tubercular Peritonitis.**—Besides the discussion of tubercular peritonitis, McNaughton reports a very interesting observation of heredity. A child apparently healthy at birth became ill a few days later and died aged twenty-one days. Autopsy disclosed abundant tubercular deposits in the lungs, and numerous cavities.

131. **Hay-Fever.**—Referring first to an article by E. B. Gleason on the treatment of hay-fever with hydrobromic acid and nitro-muriatic acid, Bishop calls attention to the fact that, while in his earlier papers, he had pronounced the acid treatment as effective, he has repeatedly emphasized the greater value of the eliminative treatment. He quotes a paragraph from his work on "Diseases of the Ear, Nose and Throat" to this effect. It is desirable, he says, to have a uranalysis made in all cases of hay-fever to determine whether there is an excess of uric acid as compared to urea and whether a sufficient amount is being excreted or not. While he repeats all he has said for the value of acid treatment for temporary relief during the paroxysm, the most gratifying results have been obtained from the use of lithia. The effervescing tablets, 3 or 5 grains, should be taken every morning and night until from 15 to 25 grains a day is taken in divided doses. He cautions against too much indulgence of the appetite and over-feeding and emphasizes the importance of taking an abundance of pure water.

132. **Common Diseases of the Throat and Pharynx.**—The points in this paper to which Murray wishes specially to call attention are: 1. Teeth should receive attention from infancy, in order that caries may not invite forty-two different kinds of micro-organisms. 2. The mouth is the primary cause of many throat troubles, and ought to receive treatment simultaneously with the throat. 3. There is a quality of mildly offensive breath, which arises from micro-organisms present in the mouth, throat, naso- and oro-pharynx. 4. A bad taste in the mouth, particularly before meals, suggests infection of the tonsils, naso- and oro-pharynx. 5. Diseased tonsils, not necessarily enlarged and often hidden, no longer act as a barrier to disease, but rather as a germ incubator, and the diseased outer surface ought to be removed. 6. The term "rheumatic sore throat" should be used with less freedom. 7. The vicious habit of the mother tasting the child's food before giving it to the child should be preached against. 8. For the same reasons all instruments, drinking utensils, should be carefully cleansed before use. 9. Coating of the tongue, which is often local in origin, should be removed as systematically as the tartar from the teeth.

139. **Care of the Nose.**—Russell insists on the importance of proper care of the nose in catarrh to prevent chronic disorder. He thinks that salt water in the strength commonly used is irritating and dangerous and advises baking soda in 2 per cent. solution, 3i to a tumbler of warm water, as the best for this purpose. He gives, also, the formula of Dobell's solution as a valuable therapeutic agent and would substitute, if carbolic acid is objectionable, menthol, thymol and salicylate of soda 2 grains each to the pint. He says this treatment should be carried out night and morning in all cases of cold in the head and describes the method of douching the nose.

147.—This article has appeared elsewhere. See THE JOURNAL of July 14, title 53, p. 118.

148.—This article has appeared elsewhere. See THE JOURNAL of November 3, ¶137, p. 1181.

FOREIGN.

British Medical Journal, October 27.

Signs and Symptoms of Bubonic, Pneumonic, and Septicemic Plague. JAMES CANTLIE.—The three types of plague, bubonic, pneumonic and septicemic are here described. The former compose about 70 per cent. of all the cases met with. The history is best considered under the headings of exposure, incubation, invasion, defervescence and convalescence. Contact is the most potent agent in its spread. It appears that the disease spreads through abrasions, wounds of the skin, scratches, etc. Infection by the alimentary canal would seem feasible and is supported by the fact of the abundance of plague bacilli in the feces and that animals seem to contract the disease in that way. Infection by the breath is unlikely, but impact of the sputum in pneumonic cases is believed to have spread the infection. The rat is credited with the largest share of animal transmission and some consider the vermin of the animal as the real agent. The body parasites of man, such as fleas, lice, bugs and also flies and ants, may absorb the plague bacilli and possibly convey them by their bites. The average incubation is five days, but it is believed that it may have a shorter or a longer one, extending to even ten or fourteen days. The maximum and minimum periods are undetermined. There are no special symptoms peculiar to incubation; general discomfort is sometimes experienced, but is not characteristic. The onset of plague is generally sudden; a splitting headache, prostration, pains in the limbs and back, etc., may usher in the disease. There is nothing characteristic, however, beyond marked prostration and early appearance of cerebral disorder, until the glands become tender or buboes appear. Abrasions of the skin should be sought for especially in the lower extremities, if buboes appear in the groin. The fluid drawn from the gland or periglandular swelling is usually found to be of the sero-sanguinolent character but later becomes sero-purulent, and finally pus. The plague bacillus will be found in numbers, unless the buboes are of several days' standing, when none may be found. The lips become cracked early and the teeth covered with sordes. Nausea and vomiting frequently usher in the disease. Diarrhea may occur early, but it is seldom frequent or profuse. The liver may be tender and somewhat swollen. The urine is slightly albuminous as a rule. The pulse is frequent from the onset and throughout the illness, becoming later soft and dicrotic and toward the end irregular and running. The lungs rarely show any change in bubonic plague, though they are attacked in the pneumonic form. Delirium is common and sleeplessness one of the most distressing symptoms. The rise of temperature is gradual up to 104 or 105 F. on the third or fourth day, falling at the end of that period sometimes below the normal. It may again increase but generally subsides after the opening and discharging of the buboes. In some cases, however, it may be high from the beginning. Apyrexia is not common in true bubonic plague, but in such conditions as pestis ambulans and fulminant plague it is the rule. The pneumonic form appears like septic pneumonia, it is discovered only by the presence of plague bacilli. The pulse is short and compressible from the first and there is much cardiac distress. Delirium, frequently followed by coma, prevails and the patient usually dies on the third or fourth day. In septicemic plague the patient seems struck down as if by active poison and the prostration from the first is extreme. There may be no buboes detectable during life, though a swelling is found in post-mortems. Hemorrhages are frequent. Apyrexia is not uncommon, delirium of the typhoid type is frequent. The disease usually ends in two or three days. The pathologic anatomy is described, the enlarged glands, congested viscera, heart and pericardial changes, hemorrhages in the peritoneum and bowels, congested kidneys, meningeal congestion. In the pneumonic type are to be found the engorged lungs with typical pneumonic consolidation.

The Bacteriology of Plague. DAVID C. REES.—Virchow, in 1879, reasoning from analogy, predicted that plague was microbic, but the discovery of the organism was made within a short period, and independently of each other by Yersin and Kitasato in 1894. The micro-organism resembles closely the chicken-cholera bacillus. It is a small bacillus measuring from one to two microns in length and from .3 to .5 micron in width, though larger forms are sometimes met with. Its ends are rounded, giving it an oval appearance and it is usually described as non-motile, though Kitasato has described it as actively motile in a temperature of 37 C. It is frequently seen arranged in pairs and in the broth-cultures seems to form streptococcus-like chains. Involution forms are

frequently met with; these occur generally under unfavorable circumstances. It does not form spores and has no true capsule. It is a facultative anaerobe. It stains readily with the ordinary anilin dyes, but is decolorized by Gram's method. In cover-glass preparations it stains more intensely at the ends, giving rise to a bipolar appearance. Laboratory cultures may exhibit this feature, but they do not always. It can be brought out best by overstaining with a strong carbol fuchsin for four or five minutes and then carefully decolorizing with absolute alcohol. The plague bacillus shows a great affinity for the thionin group of stains. It grows well in ordinary media and at a temperature of 25 to 30 C., so that in a hot climate an incubator may often be dispensed with. Haffkine's stalactite growth is also noticed as characteristic. Apes and rodents are especially susceptible to inoculation, sheep, goats, cows and horses to a less degree, and dogs and cats very slightly. Birds and also swine are refractory to repeated inoculations. Rats or guinea-pigs usually show evidence of intoxication on the first day. There is no dispute as to the bacillus being the cause of the disease. It does not, as a rule, possess high powers of resistance outside its vertebrate hosts. It is readily killed by direct sunlight, disinfectants, or rapid drying at a high temperature; with slow drying it has more resistance. It is, therefore, more readily killed in a hot, dry than in a damp temperate climate. Pure cultures which are protected from light and drying may retain their vitality for months. It is extremely resistant to cold. Laboratory cultures soon lose their virulence, but may regain it by passing through susceptible animals. Inoculation is usually through the skin. The Australian commission states that it has succeeded in infecting a rat by rubbing a virulent culture into the intact skin. It is possible that in densely-crowded dwellings it may be contracted by aerial infection. It is not likely that it is usually contracted through the intestinal tract, though this may sometimes occur. The Australian commission is inclined to believe that infection takes place sometimes through the tonsils. With sporadic cases at the onset of an epidemic, the bacteriologic examination should be careful and systematic. During the epidemic, however, a provisional diagnosis can often be made by simple examination of the cover-glass preparations made from the glands, sputum or blood; It is good practice to examine the blood in all cases of plague. The bacilli are usually present in very small numbers in peripheral blood; Rees finds it best to make the preparations on slides for this reason. In mixed infections, endeavor should be made to isolate the bacillus from plate colonies or by the employment of Haffkine's salt medium. It may sometimes be necessary to make sections of organs and glands in suspected cases. The diluted blood-serum obtained from a case of plague is said to cause clumping with plague bacilli, but this has not been proved of practicable value, as it can be obtained only late in the disease, and then not always. Rees regards the bacillus as belonging to the septicemic group of pathogenic micro-organisms, that is, one that may be present in the blood and cause toxemia or death without local manifestations. It is parallel in some respects with the anthrax bacillus, though its action on the lymphatic glands is different. It does not itself produce pus, but can cause necrosis of tissue.

On the **Methods of Making Antitoxic and Preventive Fluids.** C. BALFOUR STEWART.—The method of making antitoxic and preventive fluids from plague are described by Stewart, who notices the serums of Haffkine, Yersin, Lustig and others. Haffkine's method is to take the broth in which the microbe was grown after sterilizing it. It is really not a serum, but a vaccin, and the misuse of the former term is to be regretted. A small definite quantity of plague poison is injected, which is easily dealt with by the body, and which can not increase, there is the same distinction as between a case of mild septic intoxication and a case of septicemia. The antitoxic serum of Yersin is used as a curative agent for plague, and also acts as a prophylactic measure, but the immunity conferred is very short, only about fifteen days. The principle of this serum is the same as that of the antidiphtheritic serum and others. An animal, preferably a horse, is immunized by inoculation at intervals with dead or living cultures of the specific microbes, and after the first or second inoculation the quantities are increased and the intervals between inoculation shortened. The animal, which takes the place of a human being who has been inoculated with a vaccin, acquires an active immunity, and if the serum of such an immunized horse be inoculated in considerable quantities into a human being suffering from the specific disease, the latter is ameliorated or cured. The serum may act in one of two ways; it may be bactericidal by killing the microbe in the body or preventing its growth, or it may be antitoxic. Roux says that antitoxic plague serum, however it is made, is always antitoxic, but that this property is more marked in some cases than in others. Those made by injecting living cultures are more antitoxic than those made by injecting dead cultures. This fact, according to Metchnikoff, explains the difference in the results obtained with the Yersin serum. Lustig's method of prepared vaccin is based on the observations that the nucleo-proteid which he separated from the bodies of plague microbes, is a substance which induces immunizing properties when injected; neither the metabolic products of growth nor toxins are used. The plague microbe is cultivated on an agar plate and the growth is scraped off and dissolved in a 1 per cent. sterilized solution of caustic potash. This solution is then rendered slightly acid with hydrochlorie or acetic acid, and the resulting precipitate collected on filter paper; after washing it is dried in vacuo. It gives the chemical tests of a nucleo-proteid and is easily soluble in a weak solution of carbonate of soda. He proposes to use this solution as a prophylactic, but no report of its trial for this purpose has been made. The results of the curative serum were not at first very satisfactory, but lately better results seem to have been obtained. Neither Yersin's nor Lustig's serum appears to come up to what might be expected of a specific treatment, and the latter does not appear to be so efficacious as the former. This is possibly accounted for in a way similar to that of Metchnikoff's explanation of the difference in Yersin's sera referred to above. Haffkine's prophylactic is the greatest success as a scientific preparation.

The Lancet, October 27.

The Role Played by the Spleen in Pancreatic Digestion of Proteids. HENRY F. BELLAMY.—First noticing the experiments of Schiff, which seem to indicate that the splenic function is essential to the formation of trypsin in the pancreas, and the apparent contradiction to this from Heidenhain's discovery of the zymogens, together with the later investigations of Herzen, which confirm in a measure the ideas of Schiff and seem to indicate that the spleen furnishes the product of internal secretion causing in the pancreas the transformation of inert zymogens into active trypsin, Bellamy next proceeds to notice the criticisms of Lussana and others of Herzen's views, and especially those of Popelski, and points out their weakness. Extirpation of the spleen apparently produces in animals no serious disadvantage, but the actual loss according to Herzen's results is that there is almost complete cessation of proteid digestion by the pancreas, this function being in such cases almost entirely performed by the stomach. The question as to the destiny of the zymogen which the pancreas continues to elaborate, is answered by the suggestion that it becomes gradually transformed into trypsin by oxidation and other agencies along the intestinal tract. It has been noticed that the spleenless animals require more food, which can be explained not only by the loss of direct proteid substances in the alimentary tract, but also in that the parapeptones normally going on to the duodenum to be converted into true pancreatic juice are, owing to the breakdown of the pancreas, no longer capable of being absorbed and assimilated by the organism. The stomach and pancreas, therefore, so far as the digestion of proteids is concerned, would appear not only to be in direct harmony with each other in the intact organism, but also if from any cause one or the other is thrown out of action, its work is assumed and efficiently carried on by the survivor.

Bulletin Medical (Paris), October 20.

The Operation on the Xiphopagus.—The entire issue of the *Bulletin* is devoted to the description of Chapot-Prevost's famous operation, with numerous photographs and skiagrams.

(See cut in THE JOURNAL, xxxiii, p. 746.) The surviving twin is illustrated as a bright, pretty girl of 12, with nothing to betray her previous condition except a straight linear scar, 15½ cm. in length, on the front of the trunk. After the separation some time elapsed before she learned to balance herself without support. The hour-glass shape of the continuous liver is illustrated. The pericardium in each was connected by a fibrous band, as was also the pleura. The latter was inadvertently opened in one during the operation; possibly this was responsible for the fatal pleuropericarditis in her case. Separate anesthesia was required for each of the twins, but methylene blue injected in one was eliminated by both. During the operation Maria made an effort to vomit, which resulted in hernia of a large portion of the intestines in each through the wound. Replacing the intestines in the two abdomens was a perplexing task, much facilitated by the aid of an assistant who had taken his position under the table, and who was able, by raising from beneath the still unincised rear portion of the connecting band, to distinguish between and separate the intestines belonging to each. Chapot-Prevost never speaks of the case as twins, but always as "the monstrosity." The singleness of the monstrosity was decided by the majority of members of the profession who examined the case, and this conception legally justified intervention, which was besides urgently demanded by the parents.

Gazette Hebdomadaire (Paris), October 18.

Cure of Hemorrhages from a Dysenteric Ulcer by Injection of Gelatin. A. PUGNAT.—The hemorrhages occurred during defecation and had been noted for five years at intervals and daily during the last year. A tumor could be palpated in the cecum. After a subcutaneous injection of gelatin the hemorrhage recurred the following day as usual, but never appeared after this.

Presse Medicale (Paris), October 13 and 27.

Uremic Origin of Angina Pectoris. A. GILBERT.—Angina pectoris is caused by a neuralgia or a neuritis of the cardiac plexus, usually of toxic origin and, in case of arteriosclerosis, connected with the uremic intoxication. This conception entails an important therapeutic indication, i. e., that a patient with angina pectoris should have every cause of intoxication from food or drugs carefully eliminated. Among the arguments Gilbert advances in support of this theory are that obliteration of the arteries and ossification of the costal cartilages are unable to induce the syndrome of angina pectoris, while neuralgia or neuritis of the cardiac plexus satisfactorily explains all the symptoms. The prompt relief that follows local anesthesia of the precordial region with methyl chlorid is another argument. Coincidence of interstitial nephritis with the angina is the rule in severe cases. The curative action of a strict milk diet is also remarkable. The milk does not cure the angina any more than it cures uremic asthma, but it enables the patient to live comfortably with his renal lesion until some new indiscretion in eating or some other cause inaugurates the toxic symptoms once more, although they may appear this time as a nervous, respiratory or gastrointestinal disturbance. Drugs, especially morphin, soothe for a moment, but then hasten instead of retarding the attacks. The iodids alone seem to act favorably on the renal process and attenuate the toxins. When the toxic angina is transient, as when it is due to tobacco, tea, coffee, etc., the cure follows removal of the cause, but when caused by an irremediable lesion of the kidneys, the syndrome is liable to recur again and again. With an exclusive milk diet the life of the patient may be prolonged, while injudicious medication may prove rapidly fatal.

October 27.

Medullary Anesthesia. F. LEGUEU.—From experience with fifty-seven patients, Legueu concludes that this method is not destined to supplant general anesthesia, but that it is an excellent method of analgesia for brief, simple subumbilical operations, and for those on the perineum, lower urinary apparatus and legs if the muscular contraction—which is not suppressed by the cocain—does not prove a hindrance to operating. The dose should average 2 gm. The symptoms that followed the injection were all slight and transient. Vomiting occurred in 13 cases after return to bed and in 11 during operation, but it was always slight and lasted less than five minutes. Cephalalgia was experienced 29 times, usually slight, but in 2 cases it was severe, and in another persisted for thirty-six hours in an extremely severe form. The temperature rose in 12 out of 55 cases. The pupils were dilated in the cases followed by vomiting and cephalalgia, and possibly this sign can be utilized to determine the tolerance. The anal sphincter became relaxed in 7 patients, with consequent incontinence. Paresis of the legs was noted in one patient for three days, but then vanished. In one case there was retention of urine for a week, in a young man operated on for a hydrocele. Incontinence of urine, persisting for three days, occurred in another. The patient is returned to his bed smiling and tranquil, free from the vomiting that follows chloroform. He can eat before and after the operation, and the best proof of the advantage of this method of analgesia is the eagerness with which it is demanded by other patients, witnesses of the first. Those who have previously had experience with chloroform are loudest in their praise of the new method.

Berliner Klinische Wochenschrift, October 22.

Trigger-Finger. TILMANN.—In the majority of cases of trigger-finger the phenomenon is due to a thickening of the flexor tendon, caused by repeated compression of the tendon against the volar side of the head of the bones of the palm by grasping a hard object by an unaccustomed hand. The thickened tendon is unable to pass the central sharp edge of the tendon sheath at the joint and waits until this edge is lowered, when, with a snap, it slips over it, and once past, acts normally. The thickening sometimes retrogresses when cause is removed. In fresh cases this may occur in four to six weeks, but in older cases three to six months are required, and in a very old case no improvement can be anticipated without an operation, which should consist in resection of the thickened center of the tendon, leaving the surface intact as much as possible.

Fracture of the Greater Tuberosity of the Humerus.—H. WOHLGEMUTH.—The greater tuberosity of the humerus is more frequently torn off in case of fracture or luxation of the upper portion of the arm than is generally appreciated. Failure to recognize and treat it, however, may entail serious functional disturbances. Suture is not necessary, merely the application of a bandage, with the arm raised and in abduction. A Middeldorf "triangle" is of great assistance in holding the supine forearm for the purpose.

Hemorrhagic Erosions of the Mucous Membrane of the Stomach. C. PARISER.—Hemorrhagic erosions of the mucous membrane are merely a complication of chronic gastritis in its early stages, or a special variety which may be called chronic, exfoliative gastritis. Pariser has found the best measure to relieve pain and cure the lesion to be lavages of silver nitrate applied after rinsing out the fasting stomach with half a liter of tepid water, twice in succession, carefully measuring the siphoned fluid to ensure that all has been removed, then introducing half a liter of .5 to 1 per 1000 solution of silver nitrate, allowed to remain one minute in the stomach and then removed, repeating this lavage twice. The stomach is then rinsed with a liter of tepid salt solution in two portions. This treatment is repeated every other day and continued for ten to twelve days after all scraps of mucosa have disappeared from the stomach contents. The diet is equally important in treatment. The measures applicable to an ulcer sometimes succeed when the silver nitrate fails, or may be allowed when lavage is refused by the patient.

Centralblatt f. Inn. Medicin (Leipsic), October 20.

Pathology of Alcohol. G. ROSENHELD.—Twenty dogs were given alcohol on an empty stomach in doses from 12 to 27 c.c., continued for a long time. In every case in which more than four doses had been administered the liver was found in fatty degeneration, the fat constituting 17 to 36 per cent. of the organ. In a parallel series of tests, 60 gm. of sugar were administered with 35 to 30 c.c. of alcohol and there was no fatty degeneration nor other symptoms of intoxication. The fat in the liver was even less than normal in this case.

Mitteilungen a. d. Grenzgebieten (Jena), vii, 1.

Traumatic Stricture of the Intestines. H. SCHLOFFER.—Nine cases of traumatic stricture are known to date and Schloffer adds a tenth. Five patients died. In order to determine the mechanism of stricture, he experimented with sixty-three dogs and several swine. He finds that contusion injuries of the intestines in dogs, that did not entail the death of the animal, terminated always in complete *restitutio ad integrum*, but in pigs an annular stricture could be produced. The conclusions are that traumatic stricture may occur in consequence of incipient invagination, the rigidity of the muscular wall having been compromised by the trauma. Annular strictures are probably favored by injury of the submucosa and of the mesentery, with resulting disturbance in the circulation, and necrosis. Partial or complete laceration may also entail a stricture as it heals with adhesions. One case is recorded in which a traumatic stricture was consecutive to an invagination which healed spontaneously with expulsion of the invaginated portion per anum. Traumatic adhesions between loops of intestines may produce stenosis sooner or later, with symptoms appearing suddenly.

Therapeutische Monatsheft (Berlin), October.

Diet in Typhoid Fever. H. EICHHORST.—There have been only 64 relapses out of the 1154 cases of typhoid fever treated at the Zurich clinic. Eichhorst attributes this success to his use of milk; 50 to 100 c.c. are given every half hour during the febrile period, the milk boiled and cooled and administered alone or in milk-soup, coffee or tea; no alcohol is given except in case of great prostration, and then always warm. This strict milk diet is continued for three days after the fever has disappeared, commencing with meat the seventh day. At the slightest indication of recurrence of fever the exclusive milk diet is resumed. He gives a tepid bath twice a day during the febrile period and then once a day. The last week before dismissal a gram of salol is administered three times a day.

Therapie der Gegenwart (Berlin), October.

Extrabuccal Feeding. C. A. EWALD.—The mixture preferred by Ewald for rectal feeding is made by stirring two tablespoonfuls or 40 gm. of flour in 150 c.c. tepid water, adding one or two eggs and about 3 gm. of salt and 50 to 100 c.c. of a 15 to 20 per cent. solution of grape sugar and possibly a glass of red wine. This represents about 450 calories, but not all of it is utilized. Subcutaneous injections of oil are painful and fail to supply the moisture needed by the system. In feeding through a gastric fistula, the opening should be made as close to the pylorus as possible in case of a malignant neoplasm, and predigested food preferred. But in case of a benign cicatricial stenosis the digestive function is not materially disturbed and these precautions are unnecessary.

Influence of Oophorin on the Transformation of Albumin. L. THUMIM.—The experiences and research described in this communication demonstrate that larger doses of oophorin can be administered with impunity than hitherto have been considered advisable. The albumin metabolism was at its highest point during the administration of oophorin in the tests and it is asserted that it does not produce the slightest destruction of the nitrogenized elements of the tissues.

Janus (Amsterdam), October 15.

Heat Melancholia. A. DAVIDSON.—Among other varieties of heat diseases Davidson thinks that we are entitled to include a heat-melancholia which often leads to suicide. This form appears to be peculiar to temperate climates and is most common when a high temperature suddenly sets in. It is doubtful if sunstroke in tropical countries is more destructive to life than this heat-melancholia. There were sixty suicides in London during the two weeks of unusually high temperature last June succeeding a cold May.

Gazzetta Degli Ospedali (Milan), October 21.

Present Status of Our Knowledge of Tuberculosis. E. MARAGLIANO.—This recapitulation of what is known in regard to the etiology, pathogenesis and cure of tuberculosis, states that the variations in the gravity of tuberculous infection are in direct proportion to the number and amount of the means of defense possessed by the organism, as can be demonstrated by investigation of the blood; also that to combat and neutralize the infection it is as necessary to annihilate or neutralize the toxins which result from the vital action of the tubercle bacilli as it is to destroy the latter. He concludes with the statements that tuberculosis can be cured, but phthisis never. Physicians must not wait for physical symptoms and bacilli in the sputa. The process is then too far advanced. The diagnosis should be based on the tuberculin test, on the demonstration of tuberculosis toxins in the urine and in the blood, on the agglutinating power of the serum, and on the demonstration of the typical disturbances in the metabolism of nitrogen. In respect to the physical signs, it should be borne in mind that any anomaly detected at, and restricted to, the apices is an indication of pulmonary tuberculosis.

Revista de Medicina Tropical (Havana), September.

Gangrene Consecutive to Yellow Fever. E. MARTINEZ.—One case of gangrene of the scrotum consecutive to yellow fever is entered in the records of the Havana Hospital Mercedes, and one of the leg, terminating in recovery, has occurred in Bango's long experience there. With these exceptions, Martinez can find no record for many years of gangrene after yellow fever. In 1896 he attended a young woman with the disease. The tenth day a patch of gangrene appeared on the thigh, which rapidly spread until the entire limb was involved and death ensued the twelfth day. The symptoms indicated thrombosis of a branch of the femoral artery, later involving the main trunk. The older writers—Rush, Moultrie, Devéze and Lefort—mention a few cases of this complication. Martinez suggests that the custom of blood-letting, so common in those days, may have contributed to the greater frequency of embolism and gangrene in earlier practice.

Vratch (St. Petersburg), September 28.

Remarkable Success in the Treatment of Eclampsia. V. V. STROGANOFF.—Out of ninety-two cases of eclampsia which Stroganoff has had occasion to treat during the last three years, only five patients have died, and two of these were moribund when received. The third died from sepsis twenty-seven days after termination of the eclampsia, the fourth from pneumonia and the fifth from atonic hemorrhage four days after the eclampsia was over, the delivery being complicated in this case by a ventrofixation done four years previously. Seventy-nine out of the ninety-eight infants were saved. He considers eclampsia a self-limited, infectious disease, the contagion air-borne, but so slightly virulent that no one except a woman in the puerperium is affected by it. His views have already been mentioned in THE JOURNAL, xxxiv, pp. 735 and 1257. He treats it with a combination of morphin and chloral, the former for its influence on the sensory centers and the latter to control the convulsions. By this means he arrests the attacks in twenty-four to forty-eight hours; the urine increases in quantity and the secretion of mucus diminishes. He has evolved the following system, which he urgently advocates: First, a subcutaneous injection of .015 gm. morphin hydrochlorate during the first attack, or when first seen, repeated in one hour. The third hour a rectal injection of 2 or 3 gm. of chloral hydrate is administered and repeated the seventh hour. The thirteenth hour a similar rectal injection of 1.5 to 2.5 gm. chloral is given and repeated the twenty-first hour. The twenty-ninth hour another rectal injection of 1 to 2 gm. of chloral is administered and repeated the thirty-seventh and forty-fifth hours. If the comatose condition still continues, with headache, especially if delivery is not terminated, the patient is still kept narcotized with small doses, .015 to .03 gm. of morphin and 4 gm. chloral for the following twenty-four hours. Systematically proceeding in this manner, the recurrence of the attacks is prevented and delivery occurs normally or can be hastened without danger to mother or child. His tabulated statistics show that the number of attacks in all his cases averaged only 2.4 to 3.3 per patient, while in other institutions they ranged from 6.9 to 9.5 during the same periods. He lays great stress on the importance of reliev-

ing the heart and lungs of every source of irritation, mechanical, physical or mental. The heart-action becomes very much depressed during an attack. Continuous reclining on the left side should not be allowed, nor even the pressure of the hand or arm on the heart or lung region. The clothing, blankets, nor pillows should not be allowed to bind or weigh on the thorax in any way to impede the action of the heart or lungs. The mouth and nose must be kept free from obstruction from mucus. Fluids should be supplied by subcutaneous injection of 150 to 200 c.c. of salt solution or rectal injection of a liter in four or six parts during the day. Warm milk can be substituted for the salt solution in case of protracted eclampsia. Digitalis, inhalation of oxygen and other measures as indicated will also be found beneficial. The patient should be turned from the right to the left side and back again every hour or hour and a half, and other measures should be applied to loosen and favor the expulsion of mucus. If the lung symptoms become alarming and edema is threatened, great benefit can be derived from dry cupping. These minor points are all of great importance, but the chief aim in treatment is the suppression of the convulsions which can surely be accomplished by the system of administering morphin and chloral outlined above.

New Patents.

Patents of interest to physicians, Oct. 16 to 30:

660,042. Powder insufflator. Wm. F. Barry, Woonsocket, R. I.
659,640 Disinfecting composition. Henry S. Blackmore, Mount Vernon, N. Y.
659,642. Clinical thermometer case. Albert F. Blagdon-Richards, Swansea, England.
659,846. Truss. Decatur D. Dennis, Chicago.
660,014. Ice bag. Daniel Hogan, New York City.
659,574. Massage apparatus. Benjamin F. Hutches, Jr., Chicago.
659,978. Antiseptic broom. Oscar S. Kulman, Savannah, Ga.
659,820. Making persulfate of sodium. Auguste and L. Lumiere, Lyons, France.
659,685. Truss. Wm. S. Miller, Maryville, Mo.
659,755. Invalid-bedstead. Dustin Moulton, Montpelier, Vt.
33,362. Design, pessary. Richard H. Vesey, Denver, Colo.
660,368. Hernial truss. James D. Day, London, England.
660,212. Syringe. Emanuel E. Ertsman, Chicago.
660,388. Catamenial appliance. Charles A. Moberg and J. E. Brady, Portland, Me.
660,233. Apparatus for treating diseases of the ear. Robert Watson, Washington, D. C.
33,447. Design, surgical stocking. Charles J. Sadler, St. Louis, Mo.
660,885. Ankle-brace. Arthur J. and R. T. Brauer, St. Louis, Mo.
660,895. Truss. Joseph Fandrey, Los Angeles, Cal.
660,859. Making soluble compounds of quinin and caffein. Aisik Kreidmann, Altona, Germany.
660,994. Sterilizing-case, James G. Mastin, Chicago.
660,781. Pessary. Horace M. Paine, Newton, Mass.
660,972. Diagnosing belt. Fortunee R. Ryan, Memphis, Tenn.
660,739. Salve-box. Augustus C. Taylor, Washington, D. C.
660,874. Bandage. George Voellner, Elizabeth, N. J.
33,456. Design, catheter. Wm. W. Harris, New York City.

Change of Address.

L. Anderson, Biloxi, to Port Gibson, Miss.
Earl V. Adams, Topeka, to Birmingham, Kan.
L. E. Blattner, 1219 Washington Ave., to 418 S. Jefferson St., St. Louis, Mo.
G. S. Beardsley, Washington, D. C., to The Holmhurst, Atlantic City, N. J.
R. H. Born, Washington, D. C., to Montoursville, Pa.
F. A. Butterfield, Chicago, Ill., to Lawrence, Mich.
E. Birney, Greene, to Nora Springs, Ia.
S. J. Coyne, Aberdeen, S. D., to Dayton, Minn.
F. R. Dwyer, 358 Lincoln Ave., to 3035 Michigan Ave., Chicago.
J. C. Dodds, Tolono, to Champaign, Ill.
Henry Fehr, Chicago, to Homestake Hospital, Lead, S. D.
B. C. Fry, Jeffersonville, Ind., to Jennings, La.
B. Getzlaff, 368 Larrabee St., to 344 Roscoe Boul., Chicago.
R. L. Gallaher, English, to Pope, Texas.
F. H. Hacking, Chicago, to Raymond, Minn.
W. A. Jaquith, 5713 Drexel Ave., to 2342 Calumet Ave., Chicago.
H. E. Knipp, 523 Scott St., to N. W. Cor. Fremont Ave. and Lanvale St., Baltimore, Md.
R. C. Kaylor, Naperville, Ill., to McLoud, O. T.
F. LeMoyne, Pittsburg, Pa., to Box 63, Port Hope, Canada.
F. P. Lytle, Branch Dale, to Birdsboro, Pa.
J. J. Larkin, 95th and Commercial, to 92nd and Commercial, Chicago.
E. E. Martin, Gambril Iowa, to 4935 Indiana Ave., Chicago.
A. B. Mathews, Savannah, to Elberton, Ga.
W. M. McCoy, Clinton, Iowa, to 625 Washington Boul., Chicago.
C. A. O'Quinn, Mayday, to 312 McIntosh St., Augusta, Ga.
J. H. Oakley, Evansville, Ind., to Marine-Hospital Service, Philadelphia, Pa.
J. H. Peeler, Henderson, to Griffith, N. C.
J. J. Pierron, 345 5th Ave., to 353 5th Ave., Chicago.
P. B. Schofield, Luling, Texas, to Newark, Mo.
F. J. Shook, 291 Ogden Ave., Chicago, to 9 Calwell Blk., Ottawa, Ill.
H. J. Tillotson, 5039 Grand Boul., to 84 Dearborn St., Chicago.
J. S. Wallingford, Newport, to Paris, Ky.

The Public Service.

Navy Changes.

Changes in the Medical Corps of the navy for the week ending Nov. 3, 1900:

Surgeon A. M. D. McCormick, commissioned surgeon from Nov. 11, 1899.

Asst.-Surgeon R. E. Ledbetter, ordered to the *Constellation*.

Surgeon C. Biddle, detached from the *Texas*, when put out of commission, and ordered home to wait orders.

Medical Director C. M. White, detached from the naval museum of hygiene, Washington, on reporting of relief and ordered home to wait orders.

Medical Inspector G. P. Bradley, ordered to duty in charge of the naval museum of hygiene, Washington, Nov. 15.

Surgeon H. E. Ames, detached from the *Kearsarge* and ordered to the *Massachusetts*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital service for the seven days ended Nov. 1, 1900:

Asst.-Surgeon J. A. Nydegger, relieved from duty in the Philippine Islands, and directed to return to the United States at once.

Asst.-Surgeon L. E. Cofer, relieved from temporary duty at Philadelphia, and directed to proceed to Washington, D. C., for examination for promotion.

Asst.-Surgeon G. M. Corput, to proceed to Cairo, Ill., and assume temporary charge during absence of medical officer.

Asst.-Surgeon W. W. King, to proceed to San Juan, P. R., on special temporary duty.

Asst.-Surgeon J. M. Holt, granted leave of absence for seven days.

Asst.-Surgeon J. S. Boggess, relieved from duty at Chicago, and directed to proceed to Philadelphia, Pa., and report to medical officer in command for duty.

A. A. Surgeon B. W. Goldsborough, granted leave of absence for four days.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Nov. 2, 1900:

SMALLPOX—UNITED STATES.

Colorado: Arapahoe County, Oct. 10-13, 2 cases; Costilla County, Oct. 15, 1 case; Ouray County, Oct. 9-16, 10 cases; Wild County, Sept. 1-30, 2 cases.
Indiana: Indianapolis, Oct. 20, 1 case.
Kentucky: Lexington, Oct. 27, 2 cases.
Michigan: Detroit, Oct. 20-27, 1 case; Delta County, Oct. 14-20, 1 case; Maple River Township, Oct. 14-20, 21 cases.
New Hampshire: Manchester, Oct. 27, 1 case.
Ohio: Cleveland, Oct. 20-27, 27 cases.
Utah: Salt Lake City, Oct. 20-27, 9 cases.

SMALLPOX—FOREIGN.

Austria: Trieste, Oct. 6-13, 1 case.
Bohemia: Prague, Oct. 6-13, 5 cases.
England: Liverpool, Oct. 6-13, 3 cases; London, Oct. 6-13, 1 case.
France: Paris, Oct. 6-13, 6 deaths.
Germany: Solingen, Oct. 1-7, 1 case.
India: Karachi, Sept. 23-30, 1 case.
Mexico: Mexico, Oct. 7-14, 2 cases, 1 death.
Russia: Moscow, Sept. 29-Oct. 6, 3 cases; Odessa, Oct. 6-13, 17 cases, 1 death; St. Petersburg, Sept. 29-Oct. 13, 18 cases, 4 deaths; Warsaw, Sept. 29-Oct. 6, 13 deaths.

YELLOW FEVER.

Cuba: Havana, Oct. 1-27, 274 cases, 67 deaths.
Mexico: Oct. 7-21, 4 cases, 2 deaths.

CHOLERA.

India: Bombay, Sept. 26-Oct. 2, 54 deaths; Karachi, Sept. 17-23, 4 cases, 3 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, Oct. 14, 1 death.

PLAGUE—FOREIGN AND INSULAR.

China: Hongkong, Sept. 1-8, 4 cases, 4 deaths.
India: Bombay, Sept. 26-Oct. 2, 86 deaths.
Japan: Osaka, Sept. 11-29, 26 cases.
Madagascar: Tamatave, Oct. 16, reported present.
Philippine Islands: Manila, Sept. 7-15, 1 case.
Scotland: Glasgow, Oct. 13-19, 14 cases, 1 death.
West Australia: Perth, April 7-Aug. 11, 6 cases, 3 deaths